FEBRUARY, 1955

Industrial FINISHING

Published Monthly in the Interest of Product Cleaning and Painting by Practical Publications, Inc., 1142 N. Meridian Street, Indianapolis 4, Ind.

Construction—Sign of Progress

Another addition to our plant—now under construction as pictured above. Customer satisfaction with our materials, technical service and prompt deliveries is responsible for our phenominal growth. Supplying the great southeast with finishes that satisfy, we continue to forge ahead. Complete technical service at your disposal.

Snyder
BROTHERS COMPANY

Manufacturers **INDUSTRIAL** *of Quality* **LACQUERS**

P. O. Box 548 — TOCCOA, GEORGIA

Magical transformations are a daily routine for users of

IC® COMPOSITION BOARD FINISHES

Using Interchemical primer-surfacers and top coats you can transform a sheet of synthetic hardboard into gleaming white or pastel bathroom tile-board, door or wall paneling, house siding or a hundred other things.

Using Interchemical POLYFAX reproductions you can build low-cost furniture, television and radio cabinets that are fitting companion pieces for the finest mahogany, walnut or limed oak. You can manufacture table and sink tops for kitchens and bathrooms in attractive reproductions of marble, mother-of-pearl, fabric or geometric designs. For the den or playroom you can choose a reproduction of leather or knotty-pine.

For further details on this finishing magic,

Call Your Nearest IC Finishes Specialist.

Interchemical Corporation

Finishes Division

FACTORIES: CHICAGO, ILL. • CINCINNATI, OHIO • ELIZABETH, N. J.
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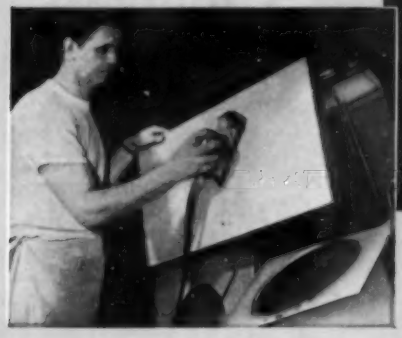
In Canada, IC products are sold by AULCRAFT PAINTS LTD., Toronto, Ont., under its trademarks.

EPON® RESIN does it!

WESTINGHOUSE Laundromat gets a tougher, more corrosion-resistant primer at much lower cost!



Laundromat has a baked Epon, flow-coated primer formulated by Pittsburgh Plate Glass Company. Film uniformity calls for only the briefest scuff sanding before application of the white enamel top-coat.

HERE'S HOW...

The protective finish on a washing machine is exposed to severe conditions during its service life. It must withstand abrasion, impact, attack from alkalies and detergents.

Recently, Westinghouse engineers adopted a greatly improved finish for Laundromat components, using a new *primer* based on Epon resin. Applied by flow coating, the primer is only one-third the thickness of previously used primers. Tests have established a *three-fold* improvement in coating durability under severe conditions . . . and application costs have been materially reduced. Some interior surfaces have *Epon primer as their only finish.*

If you need a protective finish like this in your paint program, ask your supplier for Epon resin-based paints and enamels. Write to Shell Chemical for the brochure "Planning to Paint a Pyramid?" on the variety of applications of Epon resins in surface coatings. Call on our sales offices for names of manufacturers who sell Epon resin coatings.

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Bulman

FEATURES

"MOST DURABLE FINISH"

ON SELF-SERVICE EQUIPMENT

Bulman steel equipment has a world-wide reputation for durability, high performance and low maintenance. An important contribution to this reputation is made by a special baked enamel finish, developed in our laboratories. It wears longer, resists abrasion, requires less repainting, and thus lowers overhead. Bulman proudly advertises it as "the most durable finish available."

The Better the Finish, the Better the Buy

GRAND RAPIDS VARNISH CORPORATION

MAKERS OF THE FAMOUS Guardsman® *FINISH AND* Guardsman® *CLEANING POLISH*

GRAND RAPIDS, MICHIGAN

FEBRUARY, 1955
Vol. XXXI, No. 4

BPA

A monthly magazine for company executives, production superintendents, process engineers, chemists, purchasing agents, paint shop and finishing department foremen of industrial plants where product surface cleaning and painting are major operations in the manufacture of parts and products of all kinds.

Industrial FINISHING

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Accepted as Controlled Circulation Publication at Indianapolis, Indiana

31 THIRTY-FIRST YEAR OF PUBLICATION

Plastic Leather. A vinyl plastic coated upholstery fabric engineered for heavy-duty transportation seating in buses, taxis, and trucks where maximum durability and wear resistance are paramount requirements has been developed by the Du Pont Fabrics Division.

"Fabrilite" Transit Special vinyl plastic coated fabric is available in several textures and a range of colors including blue and rust in a tweed fabric reproduction.

* * *

"Do-It-Yourself" Spray. Permite "Do-It-Yourself" Spray Enamel, a new high gloss, quick drying, alkyd enamel packaged in spray containers, has been introduced by a firm in Cincinnati, Ohio. The new line features 12 non-toxic, popular colors safe for use anywhere, even the nursery, according to the company.

* * *

Continuous Operation. Industry, under today's more competitive conditions, must maintain maximum production and reduce the costs wherever possible. Maintenance work which insures plant usability, reduces accidents and eliminates "down time" plays a key role in accomplishing this.

* * *

Waterless Skin Cleaner makes it possible to set up hand cleaning stations right in the work area. This saves a long walk to the wash room.

Metered amounts of the skin cleaner are delivered from a polyethylene dispenser by merely squeezing the nozzle. It thoroughly cleans most soiled hands. The cleaner contains lanolin and similar emollients and hexachlorophene to guard against dermatitus, drying and chapping.

* * *

Fire Barrier. In its first year of use as a fire-retardant barrier, more than 5,500,000-sq.ft. of Koroseal flexible material have gone into industrial roof construction, according to The B. F. Goodrich Co., Industrial Products Division.

A new roof construction, developed by Lexsuco, Inc., Cleveland, utilizes a "vapor varrier" of Koroseal flexible material. The new construction prevents drippage of inflammable asphalt or tar which can accelerate the growth and add to the seriousness of industrial fires. Use of the Koroseal vapor barrier eliminates all combustible materials between the roof deck and the insulation.

* * *

Improved Muffler. The development of a Cycline Muffler, designed to capture carbon particles from exhaust stream and eliminate the discharge of ignited solids in exhaust gases is announced by The Yale & Towne Mfg. Co., Philadelphia 15, Penna.

Centrifugal action throws solid particles into a collector, leaving only the gases free for exhaust. When installed

THIS is IT!!!

DOLVAR

BURN RESISTING

AIR DRY OR BAKE

WATER WHITE

• You will be hearing a lot about this new, outstanding catalyzed, clear synthetic finish for wood. High in solids. It is so tough you can't knock it off with a hammer! A burning cigarette will not even blister or mark it after two or three minutes. Positively will not cold-check, print, soften or pad-mark. Withstands alcohol, water, nail polish, lacquer thinners, etc.

NON-YELLOWING!!

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We use Lacquer Thinner for:
☐ Spray ☐ Dip ☐ Cleaning ☐ Other _____

We use Lacquer Thinner on:
☐ Metal ☐ Wood ☐ Other _____

We want it to dry:
☐ Fast ☐ Slow ☐ Medium

Name _____

Address _____

City _____ Zone ____ State _____

on gas or diesel powered trucks, the new muffler reduces the possibility of ignited exhaust particles as a source of ignition to combustible material.

* * *

Rubber Mats designed to prevent slipping and to relieve workers' fatigue have been developed. Made of live rubber, the mats have raised ribs or corrugations that grip the soles of shoes. They are for use around solution and rinse tanks where wet concrete or iron grille floors are slippery.

The mats come in two designs, Niru Shad-O-Rug and Niru Cross Rib, in either gray or white. The Cross Rib is available in 36-in. and 48-in. widths up to 60-ft. long. The Shad-O-Rug in 48-in. widths only.

* * *

Automatic Education. To educate employees, an automatic projector has been developed that shows regular 2 x 2-in. Kodachrome slides containing an illustrated safety message or a series of production or promotional pictures. Picture size is 16 x 23-in.

The machine holds 30 slides; it can be set for continuous operation or for definite intervals of an hour or two at lunch periods, shift changes, etc. The projector has a stop and go switch so that any slide may be held for discussion or for added viewer interest.

These educational pictures should be ideal for use at safety meetings, foremens meetings, in cafeterias, rest rooms, etc. Either or both the projector and slides may be purchased outright, or obtained on a rental basis. Also you may use "home made" Kodachromes.

* * *

Paint Helps Guide Traffic in Baltimore, according to "Paint Progress" published by The New Jersey Zinc Co.

(Continued on page 121)

Zatex®

modern multi-colored paints for modern merchandising

ZATEX multi-colored enamels* give you combinations of two or more colors in *one* application!

PLUS . . .
Excellent durability
One coat coverage
Reduces surface preparation costs
*Patented

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for Industrial Finishes
Stamford, Conn.
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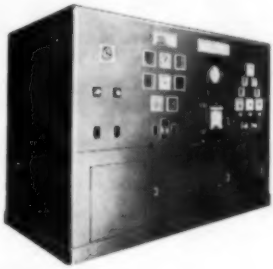
Governors by WOODWARD

WATER TURBINE GOVERNORS

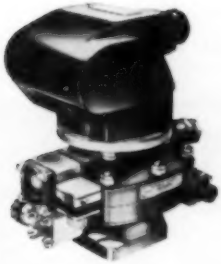


● Hydraulic speed governors and speed control systems produced by the Woodward Governor Company, Rockford, Ill., are essential parts of many world-famous hydro-electric power plants . . . military and commercial aircraft . . . and giant diesel locomotives.

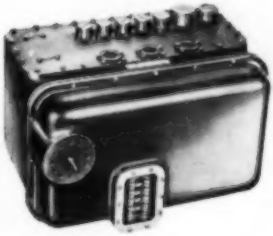
Woodward engineers have pioneered with the aircraft industry in making flying safer and better.

For instance, a governor for controlling the pitch of airplane propellers was one of the numerous "firsts" initiated by Woodward. Another famous first was a successful diesel engine governor.

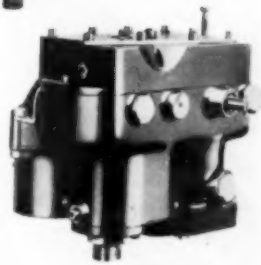
Woodward's modern experimental and testing laboratories and their advanced production techniques contribute to greater efficiency and finer workmanship. And, the "know how" obtained through Woodward's 85 years of service has resulted in better governors at lower cost.



AIRCRAFT
GOVERNORS



DIESEL
ENGINE
GOVERNORS



"Coatings by Lilly"

● Lilly Oil Proof Enamels are used extensively on Woodward products. Another typical example of Lilly coatings at work for industry!

LILLY VARNISH COMPANY
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INDIANAPOLIS, INDIANA

Serving industry with all types of product finishes and coatings:
VARNISHES • LACQUERS • ENAMELS
METAL LITHO COATINGS • STAIN and WOOD FILLERS

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● Deburring metal grille with cartridge rolls

● Smoothing castings with PORT-A-BELT Grinding Attachm

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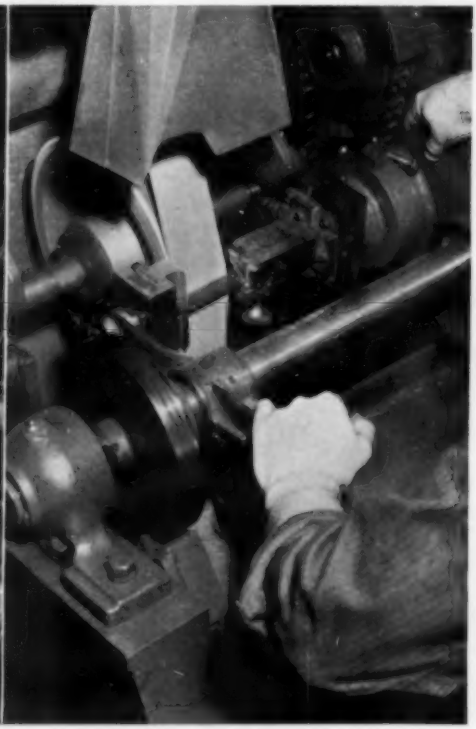
CALL YOUR CARBORUNDUM DISTRIBUTOR or salesm today... listed in the yellow pages of your phone book under "Abrasiv or "Grinding Wheels." He'll recommend the coated abrasive desig for your particular operations... give you a demonstration in your o shop, on your own equipment.

FREE! COATED ABRASIVE SELECTOR helps you cho the proper abrasives for every application. Write The Carborund Company, Dept. IF 82-54, Niagara Falls, New York. In Canada: Ca dian Carborundum Company, Ltd., Niagara Falls, Ontario.

olishing crankshafts with abrasive tape on automatic machine.



● Grinding jet aircraft blades on abrasive belt machine

our **TOUGHEST** *production* **SCHEDULES!**

r grinding, finishing or polishing any kind of tal...with portable equipment or complex auto- tic machines...the *proper* coated abrasive prod- s and techniques developed by CARBORUNDUM save hours of production time, cut your ts, and give superior results on every job.

P QUALITY abrasive grain—silicon carbide d aluminum oxide—durable cloth and fibre kings, and tough resin bonds with greater lding power, combine to give you belts, tapes, discs, sleeves, cones and rolls that cut faster, last longer and produce better finishes.

SPECIAL ATTACHMENTS developed by CARBORUNDUM save time and money, too! The "61" PORT-A-BELT Grinding Attachment, for example, lets you bring the abrasive belt to the work... gives fast, low-cost grinding on any surface—flat, convex or concave. *One* operation with PORT-A-BELT replaces two or three with conventional tools.

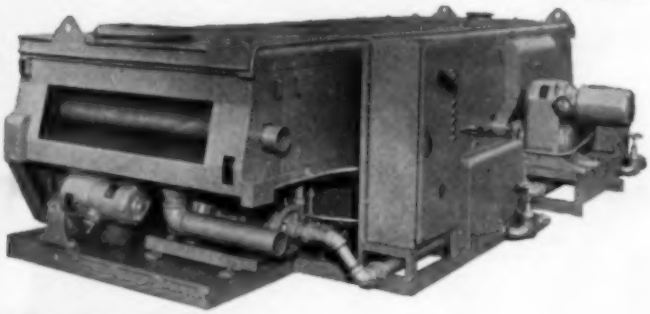
CARBORUNDUM

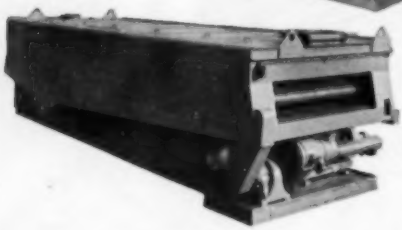
REGISTERED TRADE MARK

...continually putting more **SENSE** *in your abrasive* **DOLLAR**

82-54

P-D Compact Design "kills" Space-Wasting Bulk





Power Spray Sheet Washers Compactly Designed By P-D To Speedily Wash Sheet Steel After Polishing

Here is a floor-space saving Sheet Washer, built to wash sheet steel after polishing. A comparative "shorty" in length, it handles sheets at high speeds—operating efficiently at a 75 foot per minute gait. P-D equips this Power Spray Sheet Washer with a powered roller conveyor, a powered brush, and a high pressure blow-off. Its compactness saves many important square feet of plant space.

Whatever your problems are for washing products during your manufacturing processes, count on PETERS-DALTON for the correct solution. For more than a quarter century P-D experts have proved their designing and engineering skill. Washers of all sizes, types, and required uses can be developed to meet your needs—whether from a single unit or to a complete installation—depend on P-D to give the services and production you have the right to expect. Just Write, Wire or Phone.

Ask for our new Power Spray Washer Tech. Bulletin No. 301

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- *Hydro-Whirl Paint Spray Booths*
- *Industrial Washing Equipment*
- *Drying and Baking Ovens*
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AFFORDS MAXIMUM COLOR RETENTION...by actual test!

The LEFT SIDE of the panel illustrated above was coated with another leading white lacquer, the RIGHT SIDE WITH NCP WHITE LACQUER. For six months the top half of the panel was covered, the bottom half exposed to ordinary indoor light. After the six month period, the area which had been coated with a competitive white lacquer and exposed to light YELLOWED. The area which had been coated with NCP White Lacquer and exposed to light RETAINED its color. If YOU have a discoloration problem, it will pay you to investigate this highly effective formulation.

Available in gloss or flat.

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NCP

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The National Chemical & Plastics Co.

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Add to Beauty and Durability

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By working closely with the technical and engineering staffs of these organizations, Pittsburgh produces tailor-made coatings of outstanding quality and performance to meet the most rigid requirements for durability and eye appeal.

For instance, for more than twenty-five years Pittsburgh has developed a variety of synthetic enamels which are used to coat the fine office equipment made by the Invincible Metal Furniture Company of Manitowoc, Wisconsin.

These finishes provide exceptional adhesion, toughness and durability. They are so easy to apply that production is speeded and manufacturing costs are reduced.

Invincible Metal Furniture is only one of thousands of industrial organizations served satisfactorily by Pittsburgh. This broad experience can be helpful in saving *you* both time and money. We'll be glad to have one of our engineers discuss your finishing problems with you at no cost or obligation. Wire, write or phone the nearest plant listed below.

PPG **PITTSBURGH**

PAINTS • GLASS • CHEMICALS • BRUSHES

PITTSBURGH PLATE GLASS

IN CANADA: CANADIAN PITTSBURGH INDUSTRIES LIMITED

Pittsburgh Enamels

of Invincible Metal Furniture

Many thousands of gallons are used annually by the Invincible Metal Furniture Company on desks, filing cabinets and other office equipment it manufactures.

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PLASTICS • FIBER GLASS

COMPANY

PITTSBURGH PLATE GLASS CO., Industrial Paint Div., Pittsburgh, Pa. Factories: Milwaukee, Wis.; Newark, N.J.; Springdale, Pa.; Atlanta, Ga.; Houston, Texas; Torrance, Calif.; Portland, Ore. Ditzler Color Div., Detroit, Michigan. Thresher Paint & Varnish Division, Dayton, Ohio. Forbes Finishes Division, Cleveland, Ohio. M. B. Suydam Div., Pittsburgh, Pa.

Versatal pump speeds window frame production

Bedding Putty Applied To Frames As An Assembly Line Operation

Tedious, hand application of bedding compound was a problem at the Midwestern plant of one of the world's largest manufacturers of wood window units. Average weekly production was 50,000 units—but hand methods of bedding were slow, costly.

Then, an air operated Alemite Versatal Pump was installed. Production stepped up immediately—costs were cut. Other important advantages of Versatal power methods were proved: fast, uniform flow of material—elimination of bubbles—absence of surge during application. No waste—because *all* the material was emptied from the pail

Alemite Versatal Pumps deliver up to 27 gallons of material per minute ... and require a minimum of maintenance. There are 22 different models, with air motors of the proper size for the air supply in *your* plant—plus accessories that get the last pound out of the drum!

Regardless of what material you use in your operations, if you buy it by the drum, Versatal can move it for you faster, better—*and at less cost!*

FREE idea book

How Versatal Methods Can Help Solve Your Production Problems. Write Alemite, Dept. L-25, 1830 Diversey Parkway, Chicago 14, Illinois.

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For further information and copies of manufacturers' literature mentioned in the editorial departments, use "Reader Service" return card in rear section of this issue.

Industrial FINISHING — Feb. 1955 Issue

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Many inquiries come to INDUSTRIAL FINISHING Magazine for information about technical problems, methods and processes; and for sources of supply for materials, equipment and supplies to be used in connection with surface preparation and conditioning, paint application, sanding, paint drying and baking, rubbing, polishing, etc.

Surfaces to be completely or partially coated for protection, decoration or for any other purpose, include components and articles made of metals, plastics, woods, and composition materials; also paper, leather, rubber and fabrics.

The services of testing laboratories, finishing consultants and special technicians are often requested. These inquiries are promptly answered. As a result, new products, materials and sources of information are continually being uncovered; valuable contacts are made and timely suggestions for future articles to be published are developed.

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Imagine—a textured and MULTI-COLORED finish—sprayed at ONE time, from ONE gun, in ONE coat that covers surface flaws and blemishes completely!

PLEXTONE Alpine Green, one of many standard pre-mixed colors available for prompt shipment. Also available in solid colors and in custom multicolors.

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COLOR-FLECKED PLEXTONE is a new industrial finish in which colors exist separately until sprayed, when they interlace as shown above.

CHARACTERISTICS

Lacquer base • Air dries approx. 30 minutes — dries hard 2 to 3 hours • Available in flat or semi-gloss • Good chemical resistance • Exceptional hiding power • Does not stain • Resists wear, chipping, cracking • Can be scrubbed, even scoured • Can be touched up without showing • Thicker film hides surface imperfections, covers porous materials • Available in non-toxic grades • Bonds readily to wood, wallboard, paper, cement, plaster, phenolic impregnated papier-mache forms, plastics, woven fabrics, and metals such as cast iron, steel, aluminum, brass, copper.

PLEXTONE—CUTS FINISHING COSTS UP TO 35%

Eliminates much costly pre-finishing, hides surface flaws. Usually only one prime, one PLEXTONE coat required!

PLEXTONE — UNBELIEVABLY RUGGED!

Color flecks go "thru-the-film," resist abuse, defy alcohol, grease, oil. Can be washed, scoured, without damage!

PLEXTONE — SALES APPEAL OF *MULTICOLOR!*

Endless new effects of 2, 3 or more colors sprayed from one gun, at one time . . . tone-on-tone, spatter-dash, etc., etc.

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Pacific Coast Division: Smith-Davis Company, 10751 Venice Blvd., Los Angeles 34, Cal.

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Gentlemen: Please send me FREE color chips, PLEXTONE sample, and application data.
I am particularly interested in PLEXTONE for finishing

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COMPLET

. . . the **EXPERIENCE** that goes into the **PLANNING** and **ENGINEERING** of **MAHON EQUIPMENT** is the item of **GREATEST VALUE to YOU!**

Illustrated here is a Complete Mahon Finishing System specially designed for contract painting operations. Facilities include Six-Stage Metal Cleaning and Pre-Paint Processing Equipment, Dry-Off Oven, Dip-Coating and Spray Painting Equipment, and a Finish Baking Oven. In order to meet customers specifications, flexibility is engineered into the metal processing equipment in order to provide for various pre-paint treatments of both steel and aluminum parts or products.

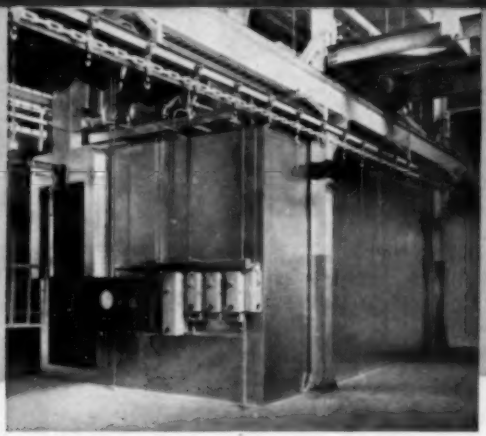
M

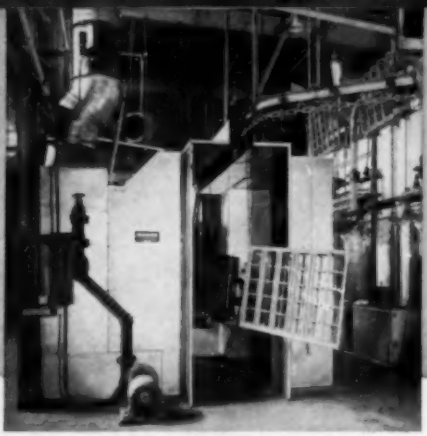
E

Finishing

SYSTEMS

. . . for ENAMELS • LACQUER • PAINT • VARNISH





COLOR-CRAFT, Inc. Chooses MAHON EQUIPMENT for High-Quality CONTRACT PAINTING OPERATIONS!

When the Color-Craft organization in Detroit decided to go into the contract painting business, the two most convincing points in selling this painting service to manufacturers were Color-Craft's know-how, backed by over twenty-five years of experience, and new, modern processing and coating equipment and other facilities capable of producing at minimum cost the fine finishes demanded in today's highly competitive market. Color-Craft turned to Mahon for the type of equipment deemed necessary for a successful and profitable operation. Mahon planned, engineered, built and installed a complete finishing system flexible in its cleaning and pre-paint processing of metals and capable of handling the wide variety of shapes and sizes in parts and products encountered in this type of finishing operation.

The choice of Mahon Equipment was not only a wise decision, but a logical one in this case, because more automobiles and more home appliances are finished in Complete Mahon Finishing Systems than all other types combined—an indisputable tribute to Mahon's performance in this highly specialized field. If you are contemplating new finishing equipment, you, like thousands of other quality-minded manufacturers, will find that Mahon engineers are better qualified to do the all-important planning, coordinating and engineering of equipment—which is the key to fine finishes at minimum cost. You will find also, that Mahon equipment is built better for more economical operation over a longer period of time. See Sweet's Plant Engineering File For information, or write for Mahon Catalog A-655.

THE R. C. MAHON COMPANY • Detroit 34, Michigan • Chicago 4, Illinois

Engineers and Manufacturers of Metal Cleaning and Pickling Equipment, Metal Cleaning and Rust Proofing Equipment, Spray Booths, Flow and Dip Coaters, Drying and Baking Ovens, and Complete Conveyorized Finishing Systems.

MAHON

VINOC

LOWE Brothers presents

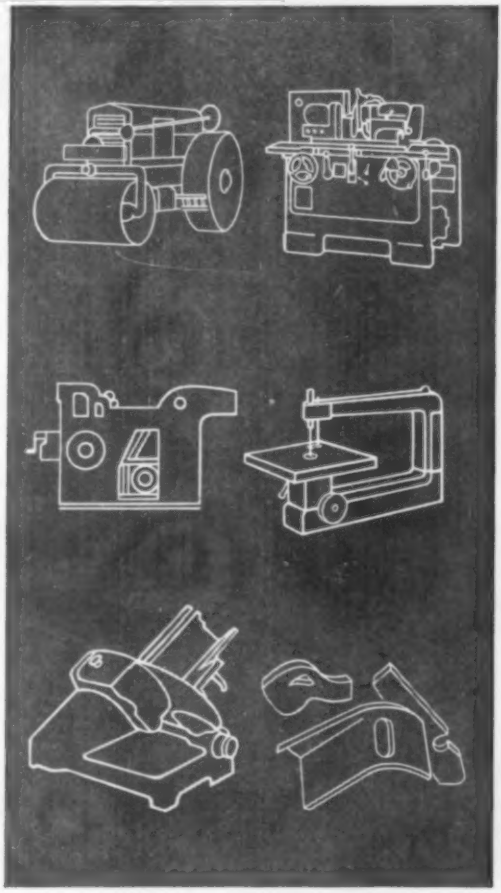
a new finishing system for high-speed production!

FAST APPLICATION · CLOG-FREE SANDING · IMPERVIOUS TO COOLANTS!

Faster flow of finished castings, reduced handling costs, finishes that resist modern high-speed coolants—*these* are the demands of today's production. Lowe Brothers "Finishing Specialists" have once more demonstrated their leadership by developing **VINOC,** a finishing system which meets every modern requirement, yet maintains the highest standards of beauty and wearability which made the Lowe Brothers name great!

EXTRA—The new filler in the VINOC system glazes with unprecedented ease, speed and smoothness with knife or squeegee!

ENGINEERED QUALITY



IMPROVED RESISTANCE TO MODERN HIGH-SPEED COOLANTS! Lowe Brothers **VINOC** finishes have proved impervious to all modern coolants to which they have been subjected—to keep in stride with today's requirements of streamlined production techniques!

FASTER, ECONOMICAL CLOG-FREE SANDING! Pigmentation of Lowe Brothers new *filler* is such that it does not clog sandpaper! It sands easier—desired smoothness is realized in less time with much less work! What's more, you enjoy a marked savings on *sandpaper alone!*

FASTER DRYING! Lowe Brothers **VINOC** system reduces drying time to a new low—speeds handling. Materials dry free of "pinholing"—as a result there's no re-working necessary!

IMPROVED RESISTANCE TO IMPACT AND COMPRESSION! Large castings take plenty of shocks and scuffs during plant handling operations. Lowe Brothers **VINOC** finishes are made tougher to resist this rough treatment and thereby reduce need for patch work.

Lowe Brothers new **VINOC** finishing system is available for either cold or hot lacquer application. Get full details now—see how you can save time and cost while getting finest finishing results with Lowe Brothers' up-to-the-minute answer to the most modern production needs—**VINOC!** Write today for prompt service without obligation.

LOWE Brothers

FINISHES FOR INDUSTRY SINCE 1870

The Lowe Brothers Company • Dayton 2, Ohio
Industrial Division
District Offices: Atlanta • Boston • Dallas
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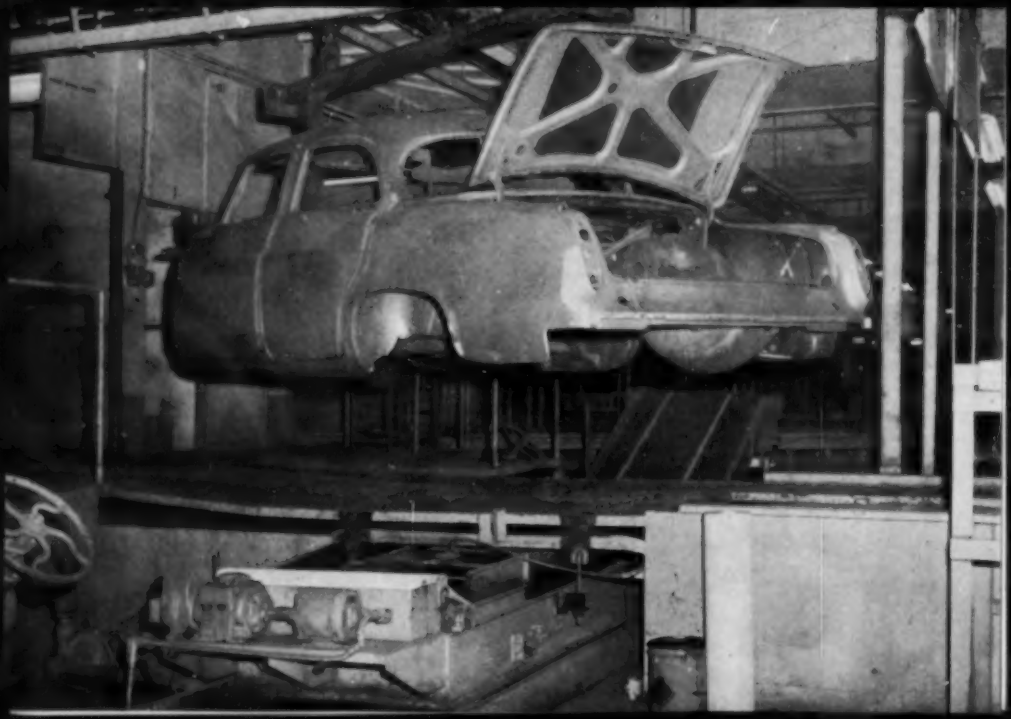
Painting Auto Bodies in Chrysler's New L.A. Plant

In this new plant you see the latest engineered setup for chemically cleaning, surface treating, painting parts, wheels and bodies for Chrysler Corp. cars. Everything is designed to operate safely, effectively and economically. The end result: Smooth, richly colorful finishes that are of a uniformly high quality for every car manufactured in this Pacific Coast factory.

Under this automobile body, which is entering the prime-coat booth, there is an automatic de-sludging setup that de-sludges primer wash water. The de-sludged water is re-used.



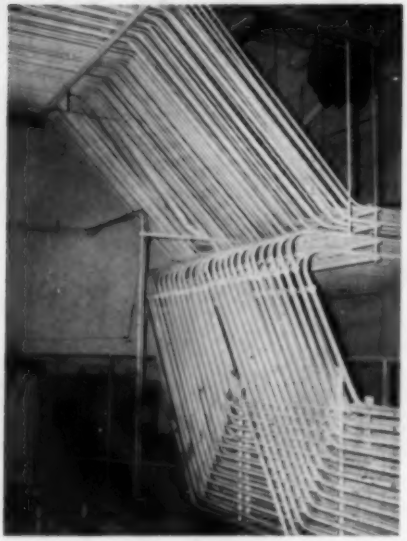
Automatic spray guns paint body as it moves through the color coat booth. The guns are automatically started and stopped as the auto body moves into and out of painting position.

WHEN PRODUCTION of the 1955 models began, the huge new body finishing department at Chrysler Corporation's Los Angeles plant whirled into full-scale operation for the first time since its building early in 1954. This installation is definitely not just a "bit of Detroit" picked up and moved westward. It is new throughout. The very latest in scientific equipment and production techniques are employed all along the line. Several "firsts," both in size and application are incorporated. Production capacity of the new department is approximately 800 completely painted and inspected automobile bodies a day, turned out during two 8-hour work shifts.

Costing several million dollars, this new department will undoubtedly establish specific trends in auto body finishing. The many automatic operations incorporated in the line, the out-sized setup for Bonderizing auto bodies, the highly efficient flow coaters employed, the complex but efficient paint distribution system . . . . such features will not pass unrecognized.

Prior to installation of this new department, automobile bodies were shipped westward from Detroit, already painted, inspected and ready for the final assembly line. Now the bodies arrive in preformed sections and are assembled just prior to finishing. The incoming body sections include roofs, cowls,

deck lids, and side panels with the door installed. These sections are jigged, welded, soldered and surface-ground, and are then ready for the finishing department.



Here is where the 56 lines from the paint mixing room enter the body finishing department. These lines include a total of more than 50 miles of pipe.

Delivering Bodies to Paint Department Automatically

Just beyond the body assembly line, unpainted bodies are picked up by a company-designed vertical conveyor and lifted to the second-story finishing department. This conveyor moves upward in stages and contains three auto bodies at any one time. While the top body is being pushed out by an automatic ram and onto the finishing department conveyor line, another body is being loaded from the assembly line into the bottom stage. This conveyor indexes upward, one body at a time, with the indexing interval controlled by an automatic contact switch on the first segment of the finishing department conveyor system. Bodies arrive just as they are needed by the finishing department; there is no piling up of work between the assembly line and finishing.

The sequence of finishing operations begins with cleaning and surface treating; this is followed by body priming, sealing and glazing, dry sanding, and then color coating. As this sequence of operations is quite standard, we will dwell more upon the finishing equipment and techniques used along the line than upon the sequence of operations.

Paint Supply Building; Safety; Pipe Lines to Stations

Before describing the finishing department itself, a description of the modernized paint supply building and its facilities is in order. This is an outbuilding, located several hundred feet from the main finishing department. Some 50 miles of piping—broken up into 56 different lines and handling 52 colors, a black flow coat, a body primer, an underbody primer, and a primer-surfacer—connect the paint supply building with the finishing department.

Paint handling is kept to a minimum. Exterior body paint arrives from the supplier in 50-gallon drums. When the paint in a drum is needed, it is first given a thorough shaking; then viscosity adjustments are made. The drum is then equipped with a direct-from-drum air-powered pumping unit

Here's what KOCH installed for the Chrysler* finishing system:

**An editorial treatment of this installation appears elsewhere in this issue of "Industrial Finishing"*

For the Chrysler Corp. finishing system KOCH installed all of the ovens, equipment for flow-coating miscellaneous components, the air replacement system with humidity control, phosphatizing equipment for the main body, phosphatizing equipment for miscellaneous components and air supply system for the body assembly line.

KOCH finishing experts can work production wonders in your plant. Let them appraise your problems now and make recommendations.

WRITE FOR BULLETIN 2F!

GEORGE KOCH SONS, INC.

EVANSVILLE 4, INDIANA

Partial view of the paint supply room, showing two rows of the 50-gallon drums equipped with air-powered mixing and pumping units that furnish 52 colors to the body color booths.

and agitator that is permanently attached to the appropriate color line leading to the finishing department.

The black flow-coat material for sheet metal parts, along with the various primers, is stored in underground tanks. When needed, these materials are pumped into one of the nine 150-gallon paint mixers in use, viscosity adjustments are made by metering the proper amount of thinner, then the material is pumped directly to the booth where it will be used.

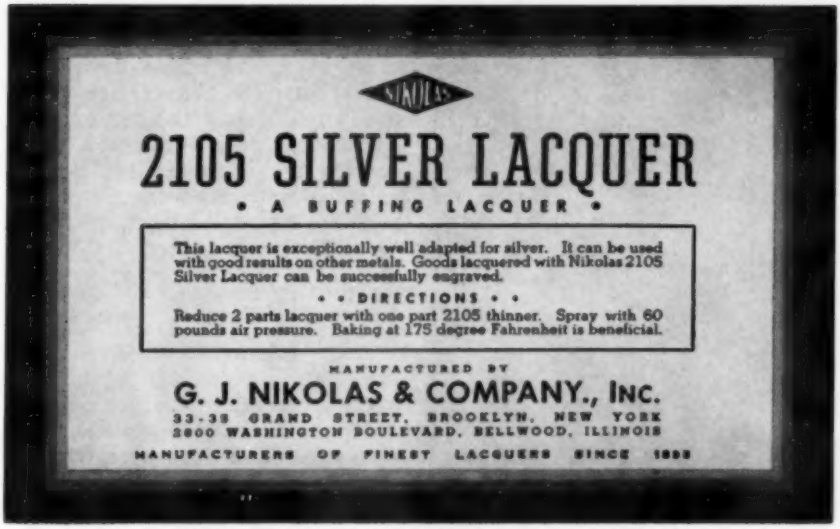
The only transportation between the paint building and the finishing department consists of the 15-gallon pressure pots containing interior colors. These interior colors arrive in 5-gallon cans, are properly thinned, then are placed in the 15-gallon pressure pots. At the spray booth, it is only necessary to change the pump from an empty to a full pressure pot. The pot itself is not opened, thus avoiding air contamination by strong solvent odors, and preventing any possibility of paint contamination.

To return to the finishing department, when automobile bodies arrive via the vertical conveyor from the assembly line, they become airborne at 16-ft. intervals on an overhead conveyor that carries them through the cleaning and surface treating process. It is at this point where a contact switch is actuated that indexes the vertical conveyor.

The Bonderizing installation is 212-ft. in length. Conveyor speed through the chambers is 17-ft. per minute. The Bonderite treatment is conventional—first a hot cleaning

QUALITY THAT SPEAKS FOR ITSELF

This Label is used for the finest clear lacquer yet produced for — Plated Goods — Silver Nitrate Films — Holloware — Cellulose Acetate Butyrate Plastic — Vaporized Metal Coatings — and many others.


NIKOLAS
2105 SILVER LACQUER
• A BUFFING LACQUER •
This lacquer is exceptionally well adapted for silver. It can be used with good results on other metals. Goods lacquered with Nikolas 2105 Silver Lacquer can be successfully engraved.
• • DIRECTIONS • •
Reduce 2 parts lacquer with one part 2105 thinner. Spray with 60 pounds air pressure. Baking at 175 degree Fahrenheit is beneficial.
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MANUFACTURERS OF FINEST LACQUERS SINCE 1895

- **Fast Drying**
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- **Non-Discoloring**
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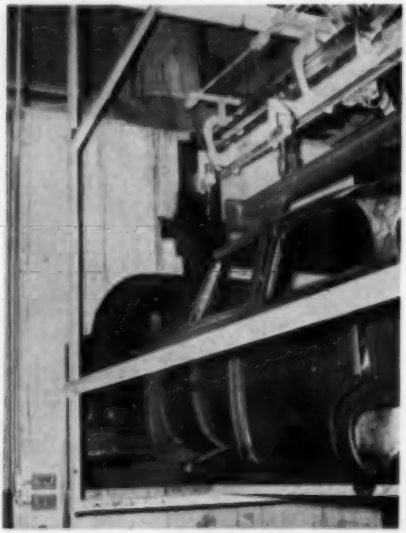
solution, followed by two rinses, a hot acid treatment for rust-proofing, another rinse, and finally a mild chromic acid treatment to provide a good paint base. This surface cleaning and treating installation is the largest of its type in the West Coast area.



Automobile body entering the cleaning and surface treating unit.

Cleaning and Surface Treating; Dry-off and Cool-off

The various chemical solutions used in the metal cleaning and surface treating process are checked continuously for concentration and purity. When additives are required, they are pumped directly into the proper chamber from the original container. This leaves no chance for the additive chemicals to become contaminated. When any solution reaches a degree of contamination that threatens work quality, it is changed immediately. Desludging tanks are an integral part of the installation. These tanks permit any sludge to settle into hoppers which can be removed and emptied. The solutions used in Bonderizing are heated by natural gas.

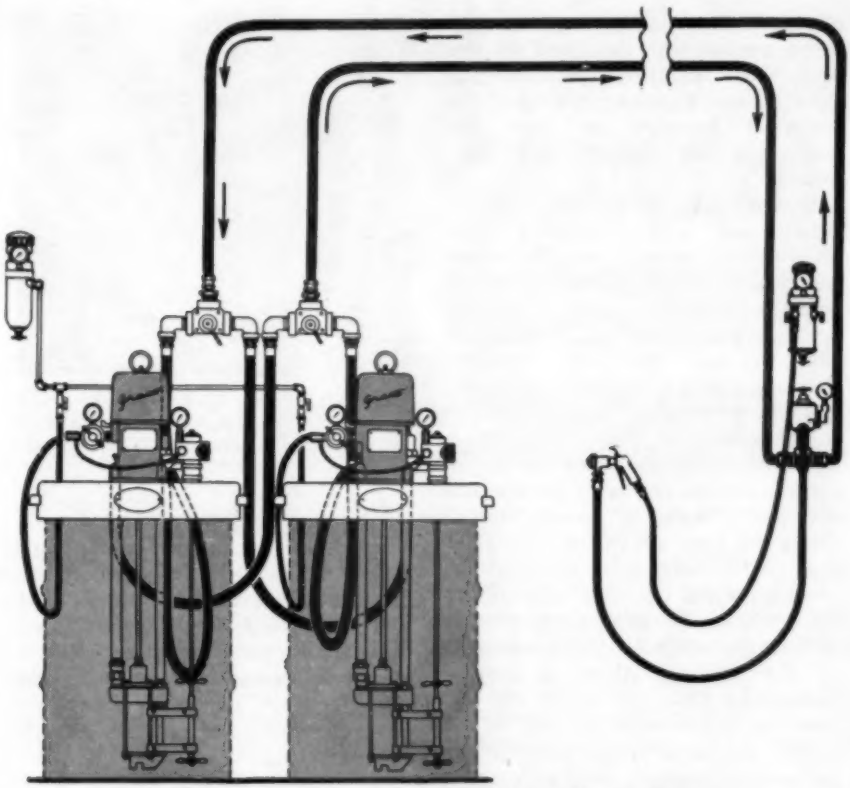
Beyond the Bonderizing unit, the bodies enter a drying oven in which there is an 80-ft. effective heat zone, at 400° F. This drying assures complete evaporation of all moisture. Beyond the drying oven, the bodies pass through a 20-ft. cooling tunnel where rapidly circulating air reduces the metal temperature to a point where it can be safely prime coated.

Respacing Bodies on Conveyor For Prime-Coat Spraying

After cooling and before entering the prime coat booth, the bodies are transferred to another conveyor on which they are spaced at 20-ft. intervals. This conveyor changeover and respacing from 16 to 20-ft. centers is necessary to provide plenty of room between the bodies during painting. The 16-ft. spacing is adequate for all other operations and it results in a considerable saving in oven length requirements. When the bodies have been primed and color-coated, they are respaced again on 16-ft. centers for final drying and inspection.

Automatic Spraying Over Traveling Floor Grates

The overhead conveyor changeover and respacing prior to priming, and the floor conveyor changeover and respacing after application of the color coat are both accom-



Here's how one automobile plant handles 52 colors!

This large West Coast automobile plant uses one hundred and four Graco Powerflo Pumps to supply their booths with 52 different colors! In this efficient two-pumps-per-color system, one Powerflo supplies a color direct from the original drum while another Powerflo keeps the standby drum thoroughly mixed and agitated for instant changeover.

Many colors or few, Graco's original "paint from drum" Powerflo Pumps can give you a "big league" paint spray system at surprisingly low cost. You can get these air-operated pumps in a broad range of sizes and types, for containers from 5-gallon pails to large mixing tanks. Plenty of power for feeding distant spray guns uniformly and economically! Write for the Powerflo catalog today!

GRACO *air-powered* **"DIRECT-FROM-DRUM" PUMPS**

GRAY COMPANY, INC.
23 GRACO SQUARE

Engineers and Manufacturers
Minneapolis 13, Minnesota

Regional Offices: New York (Long Island City), Philadelphia, Washington, D.C., Detroit, Chicago, Atlanta, San Francisco

plished automatically. A mechanical servo mechanism, designed by the firm that installed the conveyor systems, coordinates meeting of the conveyor hangers so that the changeover is smooth and foolproof.

Immediately after this conveyor changeover and respacing, the bodies move onward into the prime coat booth. Here automatic spray equipment applies both the body prime coats, while other guns are used for the underbody priming. Operation of the automatics is controlled by "electric eyes." When a forward moving body intercepts a light beam, the guns are set in operation; when the body passes and the light beam is re-established, the guns stop operating. Chrysler finishing experts point out that the quality of all coatings applied by their automatic spray equipment is uniformly excellent. Final touch-up of the prime coating is accomplished by hand spraying just before the body leaves the booth.

The gratings in the floor of the prime coat booth are of an endless belt type and move constantly. They are automatically cleaned in a lye tank once each revolution. Overspray that gathers in the sub-floor water bath in the form of sludge is removed by filtering so that the water can be re-used. Re-use of industrial water has become an important accomplishment in the Southern California area where every gallon must be piped in from hundreds of miles away.

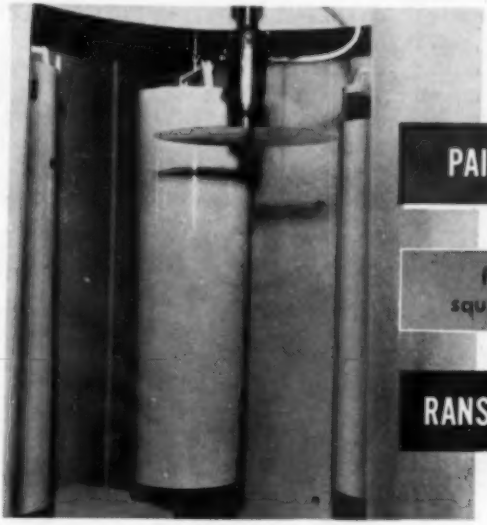
Immediately after priming, the bodies proceed through a drying oven operated at 360° F. Drying time is about 30 minutes. Beyond

These electrically driven pumps furnish additives to the Bonderizing chemical solutions directly from the containers. Continual solution analysis is maintained.

this oven, the bodies move along a line where the various sealers and glazes are applied, and through another oven operated at 280° F. They are then dry-sanded, vacuumed, and blown off to remove any dust. Before entering the color booth, the door "reveals" (door edges that are covered when the door is closed) are painted.

Color Coats Are Sprayed Automatically Too

When the bodies first enter the color booth, they are given a "quick over" hand spray applied in a manner to assure good edge coverage. Then they move onward for automatic spray painting in the color booth. The guns are set in operation when a small arm protruding from the conveyor hanger contacts a metal flag which is positioned in the floor along the line of conveyor travel. The same arm, contacting a second flag, stops the gun after the body has passed. These flags may



PAINT MILEAGE JUMPS

from 370 to over 600 square feet per gallon with

RANSBURG NO. 2 PROCESS

● When General Water Heater Corp., in Burbank, Calif., switched from hand spray to Ransburg No. 2 Process in painting water heater jackets, paint mileage increased almost 65%. Where General formerly got 370 square feet per gallon of paint, they now get over 610 per gallon.

On this installation, units ranging from 20 to 100-gallon size are painted with Ransburg No. 2 Process reciprocating disc atomizer. Changes in jacket sizes can be made without stopping the conveyor. With the reciprocating disc atomizer, change in stroke length is made "on the fly" without shutting down production. General also paints smaller parts, such as heater tops, bottoms, doors and legs, with the Ransburg equipment.

In addition to paint and labor savings, General Water Heater is getting "excellent consistency" and a high quality finish on their products. Another on-the-job-example of the unmatched efficiencies of the Ransburg No. 2 Process of electrostatic spray painting!

Ransburg maintains complete laboratory facilities for test-painting YOUR products under simulated production conditions. Why not let us show you what Ransburg Electrostatic Processes can do for you in YOUR finishing department. No obligation.

For further information about Electrostatic Painting Processes and complete Ransburg services, write Dept. I

Ransburg **ELECTRO-COATING CORP.**

Indianapolis 7, Indiana

RANSBURG

be restationed at any desired intervals along the conveyor to start and stop the guns for maximum coverage but with a minimum of waste spray.

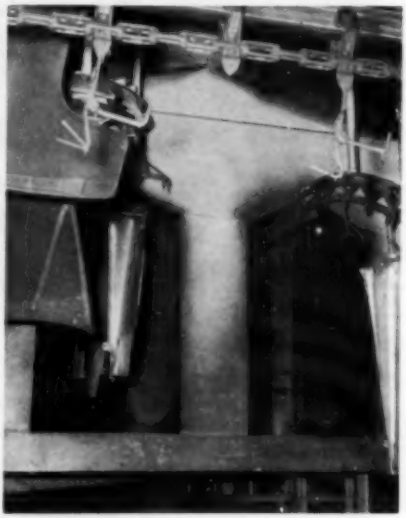
Overspray in the color booth is collected in a subfloor water tank, filtered out, then re-processed into a gray primer. Here again the water is re-used after filtering.

Beyond the color booth, the bodies are recentered at 16-ft. intervals on a floor conveyor chain. This chain carries them through a 360-ft. long drying oven operated at 280° F. Drying time on the bodies is approximately 30 minutes. Beyond the oven, the bodies pass through another circulating air cooling tunnel, then onto the final inspection line.

Lighting Installation to Show Perfect Finish

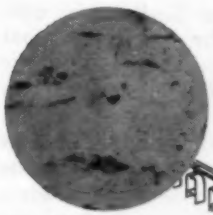
Along the inspection line, lighting installations are placed in such a way that they bring out the highlights of the paint coating in the specific area being inspected at that point. It is pointed out that these highlights make it much easier to notice sags, runs and other painting defects that must be caught and remedied. Beyond the inspection line the one-color bodies are routed to final assembly; bodies to receive a two-color job are routed into a booth where the second color is applied by hand spraying, after proper masking.

One of the outstanding auxiliary facilities in the new Chrysler body finishing department is the paint booth air-conditioning installation. This installation consists of 13 coordinated air make-up units, each capable of delivering 110,000-cu. ft. of reconditioned air per minute, or a total combined output of 1,400,000-cfm. Air is drawn into each unit by a large electrically-driven fan with remotely controllable blades. The air is then successively filtered, heated, washed, humidified, filtered again, re-heated, then forced into the various spray booths. This system was installed by a local air conditioning firm. Chrysler finishing experts insist that proper booth air conditioning is vital to quality work.

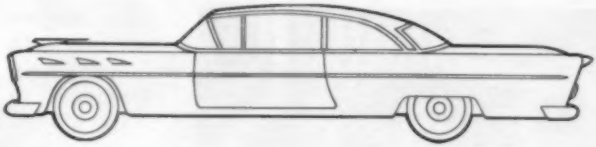


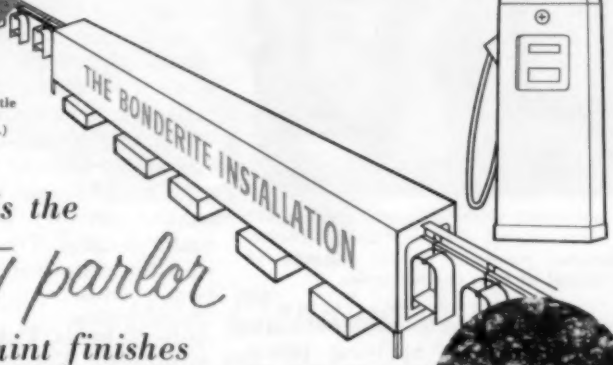
Here automobile body components are entering the two large flow coaters. The prime coat flow coater is at left; the enamel flow coater is at right. Paint for these booths is supplied directly from the 150-gallon paint mixers in the paint room.

So far our discussion has dealt entirely with the body finishing line. But the facilities used for finishing the various sheet metal and detail parts are just as comprehen-

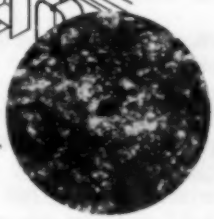


BEFORE BONDERITE . . .
Plain metal surfaces are smooth, slippery, offer little for paint to hang on to. (100 times magnification.)





This is the beauty parlor for fine paint finishes



AFTER BONDERITE . . .
Bonderite-treated metal has a fine, nonmetallic phosphate coated surface, takes and holds paint securely. (100 times magnification.)

As the photomicrographs show, a trip through the Bonderite "beauty parlor" changes the surface of metal—changes it to a nonmetallic over all phosphate coating which is integral with the metal itself.

This coating protects and preserves beauty three ways: (1) by anchoring the paint, (2) by resisting rust and corrosion, and (3) by preventing the creep of finish failure if the paint film is scratched or broken.

The leading painted metal products in every classification, from automobiles and appliances to steel windows and x-ray equipment, are treated with Bonderite.

Your metal products, too, should all go through the Bonderite "beauty parlor" before they arrive at the paint booth. It's the economical, effective, *proven* way to assure lasting fine appearance for fine paint finishes.

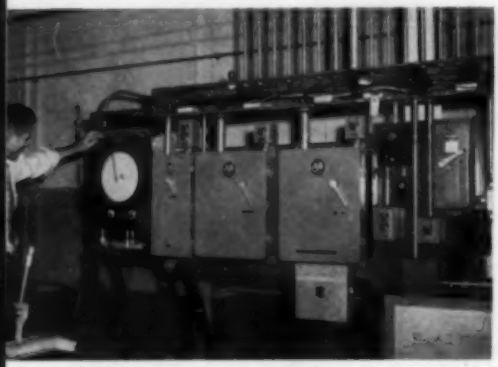
Write for full information.

Since 1915—Leader in the Field

PARKER RUST PROOF COMPANY
2176 E. Milwaukee, Detroit 11, Michigan

PROTECTED BY Bonderite PARKER RUST PROOF CO. QUALITY CORROSION RESISTANT

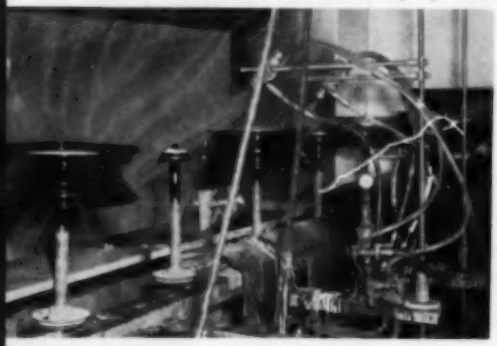
BONDERITE corrosion resistant paint base | BONDERITE and BONDERLUBE oils in cold forming of metals | PARCO COMPOUND rust resistant | PARCO LUBRITE wear resistant for friction surfaces | TROPICAL heavy duty maintenance paints since 1883



The automatic viscometer and controls for the black enamel that enters flow coater. Viscometer maintains correct viscosity of the enamel at flow coater nozzles.

sive and complete. Large flow coaters are used for applying prime coatings to these parts, and for the black enamel coating on sheet metal parts. Paint for the flow coaters circulates directly from the paint mixing room. One hundred gallon holding tanks are provided on each flow coater to maintain an adequate pump head.

This setup paints 500 wheels an hour. Wheels revolve as they pass automatic spray gun nozzles. Guns operate only when the wheels are in painting position. The water curtain effectively takes care of all overspray.

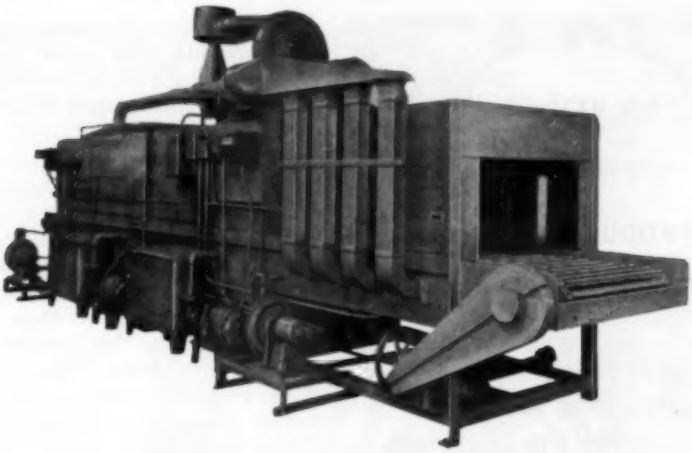


An interesting feature in conjunction with the black flow coat application is use of an automatic viscometer to control enamel viscosity at the flow coater nozzles. While this viscosity is supposedly adjusted in the paint mixing room it is a long way through underground pipes from the paint mixers to the flow coater nozzles, and viscosity changes are bound to occur. When this happens, the automatic viscometer detects the change and injects additional thinner into the enamel directly behind the flow coater nozzles. Time lag in making this viscosity correction is about two seconds.

Auto Wheels Painted by Automatic Equipment

Spinner-type hangars and automatic spray guns are used in the hood and fender booth. Two fenders and a hood are hung on each hangar. The loaded hangars are indexed through the spray booth, pausing for a 50-second spin-and-spray cycle before the automatic spray guns. Contact switches start and stop the guns so that paint spraying occurs only when the loaded hangar is spinning before the nozzles. A friction-type flat-faced pulley on top of the spin hangars contacts a stationary-mounted friction pulley when the hangar is in position for painting, thus causing it to spin.

Painting of wheels is also accomplished automatically by a new spray gun setup. Wheels, mounted horizontally on a conveyor, spin as they pass the spray nozzles, thus assuring complete coverage. Here again contact switches are used to



★Another TOUGH Cleaning Job handled by A-F Cleaning Equipment

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Oakite paint strippers may help you break the bottleneck

When painting rejects slow production, you may need one of the stripping methods described in "How to STRIP PAINT", a free booklet which answers many questions about effective stripping procedures. For example:

¶ What's the cheapest way to strip metal parts in large volume? *See page 9.*

¶ What strippers are best for removing oil-base paints? . . . Synthetic enamels, alkali-resistant plastics or resin-base paints? . . . Japans, wrinkle finishes, nitrocellulose lacquers and ureas? *See page 12.*

FREE For a copy of "How to STRIP PAINT" write to Oakite Products, Inc., 32F Rector St., New York 6, N. Y.

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start and stop the spray guns so they operate only while a wheel is in painting position before them. This setup can produce 500 painted auto wheels an hour.

While installing the new body finishing department, Chrysler engineers went "all out" to incorporate every safety device known to modern industrial science. The ovens, conveyors, air supply, etc., are all interlocked so that failure at one point in the system immediately shuts down other parts of the system where injury due to the failure might occur. All Safety Codes were carefully adhered to. The entire interior of the department was painted with a fire-retarding paint at a great excess in cost over conventional interior paint.

The difficulties involved in installing such a large finishing department "from scratch," so to speak, were aptly summed up by one Chrysler engineer: "We used more midnight oil than paint when we first started to roll!"

Note: Some of the concerns whose cooperation helped to make this article possible are the following: Binks Mfg. Co., The DeVilbiss Co., Gray Co., Inc., George Koch Sons, Inc., Parker Rust Proof Co., and Jervis B. Webb Company.

Correction on Date of N. Y. Courses in Finishing

In the news item published on page 92 of Jan. 1955 issue, regarding the seminar on New Developments in Organic Finishes, the sessions will be on Mondays (not Tuesdays) Feb. 7 to May 23, from 8:10 to 9:55 p.m.

Dipping; Flow Coating Go "Modern"—I

THERE IS A definite trend toward automatic finishing systems. If your contemplated system is either dipping or flow coating, the problem of drainage must be taken into consideration.

With the exception of some concealed parts, where the coating is only intended for protective purposes, and where appearance is certainly no factor, few if any manufacturers depend upon coating the parts and then allowing them to travel long expensive distances over drain pans to permit the removal of excess paint. This method is outmoded. It is not economical; practically all of the paint drained off the parts hardens in the drain pans and becomes waste. Time is consumed during the excessively long drain period.

Unless the dipping or flow coating operation is strictly controlled at all times, uniformity of film thickness is impossible. Unless proper steps are taken to control drainage of excess paint from the product, runs, sags and fatty edges are almost sure to result. Control of paint viscosity and the controlled drainage of excess paint are both necessary to produce a satisfactory coating job by dipping or flow coating. These subjects will be individually discussed in future issues of this magazine.—*Mr. X.*

Clean metal, chemically surface treated to make the paint adhere better, is now specified on finishing jobs.

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Nox-Rust's Vapor-Wrapper is a chemically treated paper that instantly releases an invisible rust-preventive vapor. The vapor mixes with moist air, rendering it non-corrosive to iron and steel. Thus Vapor-Wrapper provides fast-acting, long-lasting protection in production, transit, and storage.

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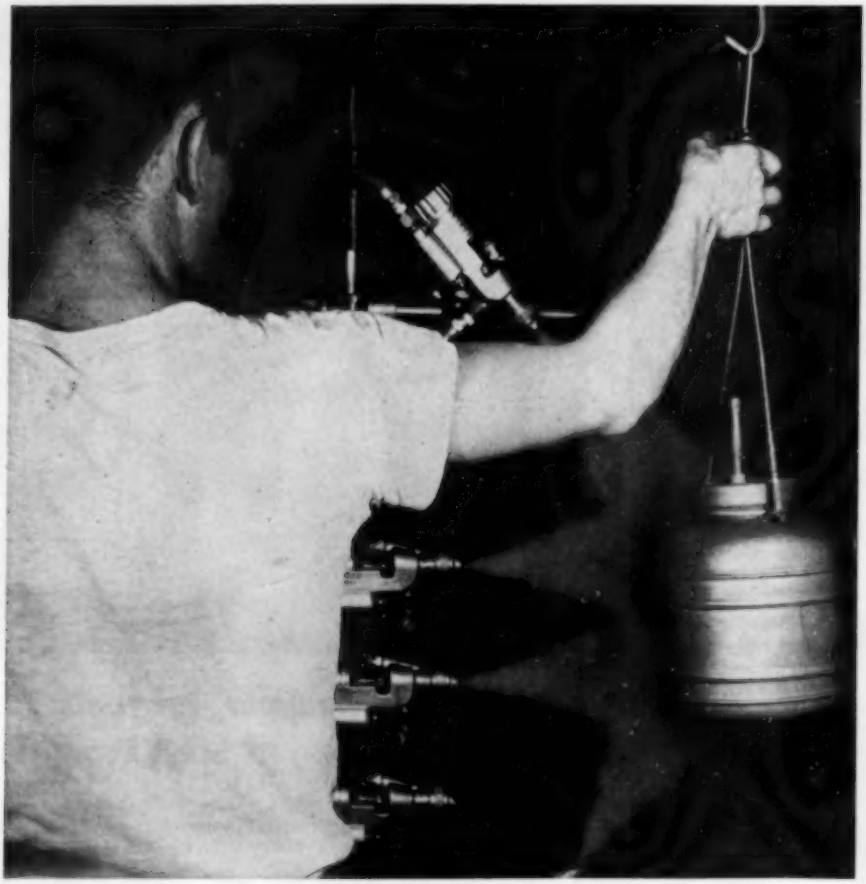
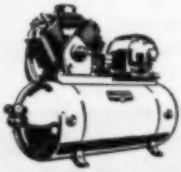


DeVilbiss semi-automatic spray equipment saves paint, gives better finishes to Royal thermic jugs, at Royal Manufacturing Company, Bowling Green, Ohio.

Spray Guns

Air Compressors



Hose and Hose Connections

BRANCH OFFICES AND DISTRIBUTORS IN PRINCIPAL CITIES THROUGHOUT

Royal goes automatic to save paint . . . get better finishes

DeVilbiss Automatic Spray Guns provide foolproof finishing for thermic jug manufacturer . . . give uniform finishes, increase paint mileage, lower operating costs, step up production by cutting rejects.

The Royal Manufacturing Co., Bowling Green, Ohio, had a problem. Their Royal thermic jugs required a high-quality hammered finish of synthetic enamel, yet manual spraying allowed too many variables in the delicate operation for their quality standards.

Royal solved its problem by installing DeVilbiss Automatic Spray Guns in a semi-automatic set-up. The film thickness applied, the wetness of coat, the degree of atomization — all are precisely controlled. Result: uniform hammered finishes of long-lasting beauty.

Furthermore, the speed and precision of the new DeVilbiss semi-automatic system have enabled Royal to step up production, increase paint mileage (from 650 to 1,100 jugs), reduce operator fatigue and rejects.

Says Royal's president, D. W. Bolton, "DeVilbiss semi-automatic equipment gives us a foolproof finishing set-up." Royal now uses DeVilbiss throughout its finishing department: spray guns, air compressor, spray booth, transformer, hose and hose cleaner.

Could you speed output and get better finishes at lower cost with DeVilbiss semi-automatic equipment in *your* paint department? Let a skilled DeVilbiss engineer survey your finishing operation and give you a full report. For complete information, contact your local DeVilbiss jobber or branch office, or write us direct for free literature.

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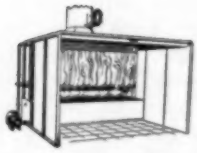

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THE UNITED STATES, CANADA AND THE WORLD

METAL FINISHES
Paint versus Porcelain

Touchy subject! Perhaps, but let's face it. Facts can't be too controversial. Let's look into the latest facts about each type of finish — its several characteristics and its adaptability to whatever products you may have in mind finishing. Make tests too — not necessarily for grim indestructibility, but for any reasonable service required — and check on the cost too; all of the costs.

BY J. P. GARDNER

ORIGINALLY there was such a gap between the possible uses of paint and the uses for vitreous enamel that the thought of ever bridging the gap never occurred to anyone. The gap now is closing rapidly—and more definitely so within the past few years. Oddly enough the contest is not between the vitreous enamel and the paint industry. The contest is real and unavoidable *through manufacturing competition* and, although it will never be thoroughly won by either side, the positions of both sides in industry are being drastically changed. The mass production picture, at present, is at its highest peak and it is serving as a veil to the great changes taking place.

Vitreous enamel applications are increasing due to some new techniques where facilities exist, but industry is up against the toughest competition of all time. Equipment and process installations, so far as automation and modernization are concerned, are no problem so long as they lend themselves to increased efficiency and subsequently to economy. Vitreous enameling has been improved and modernized, but not nearly at the rate that organic finishing has. Looking at it from another angle, the gap is rapidly being closed from the paint side.

Paint used to be paint at one time, but not any more. It is now a challenge for the top position of protective appearance finishing,

"I explained about phenolic epon resin combination paints... the silicones... epoxy resin base paints... phenolics... methylon, etc., but he just insists on vitreous enamel. Say Dad, just what is this new term 'Vitreous enamel'?"

with resistance properties previously unheard of. When industry had just paint, there was no choice other than vitreous enamel for many applications. Today, industry is more concerned with public opinion through the omission of vitreous enamel than it is with the performance properties of the new organic coatings. Paint is no longer a paint maker's product. It is a product of chemical research which seems to be in a stride rather than nearing the finish line.

Paint alone is raising havoc with vitreous enameling volume, but without thought of teamwork, the plastics boys and the plating boys are also grabbing a share of the vitreous enamel business. There must be a basic reason for all of this and, without a doubt, *that reason is the all-mighty square foot finishing cost.* A lesser but important reason is the shortage of vitreous enameling facilities. Vitreous enameling will, of course, stay in industry, but it will obviously be

confined to specific locations where it is positively impossible to replace it. It will undoubtedly stay in industry to the extent that it will always be a good specialty to know something about.

Cost of Finishing Per Square Foot of Surface

For all practical purposes let us say that multi-coat paint systems of the highest quality are being applied by industry for from $0.02 to $0.035 a square foot. Compare this with the cost of putting on a ground coat and a finish coat of vitreous enamel at something like $.15 a square foot.

Finishing is an important part of our product manufacturing cost. When we build a product with 50-sq. ft. of surface to be finished, we must choose between a possible finishing cost of $1.25 and $7.50. Since vitreous enamel no longer has an edge on appearance, this merely means that it will be used if there is no possible way to avoid it. All of this means just one thing. The manufacturer's choice is usually the least cost, with the lowest number of headaches, and the lowest equipment investment.

Refinishing Rejects is Easier, Cheaper With Paints

There have been many interesting comments concerning scrap. For all practical purposes vitreous enameling scrap remains as such, while rejects from painting processes can be reworked easily and economically. So, while the scrap pile of vitreous enamel ware sometimes grows to sizable proportions, the paint rejects are being reworked right in with the production process.

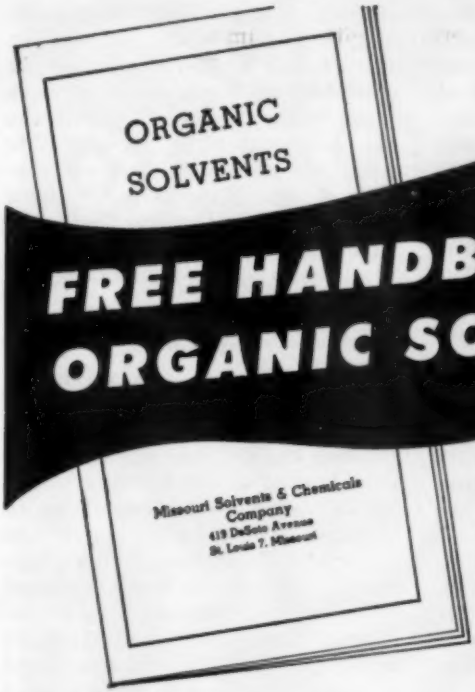
Of course, there are several unavoidable reasons for vitreous enamel scrap. The main reason however is chipping, which occurs not only in the enamel handling process, but also during assembly, shipping and installation. The insult upon injury factor is the consumers' changing attitude toward vitreous enamel. They have had their lesson from enameled cooking ware. Stainless steel, copper, aluminum and pyrex glass seem to have taken over.

Each Type of Finish Has Its Place in Industry

Let us not be so bold as to say that we can do without vitreous enamel. It certainly does work in places where organic coatings have failed miserably. Just try to paint the inside of your bath tub or sink and see for yourself. Well, the sink and the bath tub don't get moved around much either. Remember when vitreous enamel was called the indestructible finish? Sure it was indestructible, so long as we were careful enough in our care of it. We have learned to treat it like glass because we know that it can't be repaired and that it actually is glass.

By the same token, organic finishes can be used where vitreous enamel could never be considered, even if the price were competitive. Could you imagine a light metal auto fender getting hit from underneath with a good sized stone if it had vitreous enamel on it? . . . .

Each of the two finishes has its place in industry and in fact in-



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dustries are built on the two finishes. There will always be need for both, but one must give way to the other based on the rate of radical changes being made in each of the two industries. We will never be able to do without vitreous enamel entirely, and we certainly haven't heard about any serious threats that would tend to supersede the use of organic finishes. The threats against organic finishes, like vitreous enamel, are moulded plastics and chemical plating. In fact it is common practice to finish moulded plastics with an organic finish. Neither of these however offer any cost advantage over paint.

If this wheeze were being prepared by a vitreous man, the tone would be much different but he still wouldn't deny the fact that he has a scrap pile, a costly enameling installation, and a cost per square foot about five times as high as an organic finish. The product users want more products for a price they can afford to pay. They are the ones who eventually carry the total cost burden, and quite obviously they seem to be getting away from the vitreous enamel finishes by their own choice.

Developments in New Organic Finishes

The present race among paint manufacturers for field position is by no means new. They sense the new markets quickly and apply themselves diligently with nary a thought of competition from the vitreous enamel industry. In fact, replacement of vitreous enamel finishes is presently their most fertile area of operation. New raw materials hit the industrial paint manufacturers with an impact which is felt in every paint testing laboratory at the same time. Each has done the "impossible" with the new raw materials, according to their own claims. So, without previous design, it turns out to be a battle of position among them and, for all practical purposes, a united effort against vitreous enamel.

Paint Testing Labs . . . . Product Performance

The battle isn't new either. It has been going on for years. At first any thought of contest with vitreous enamel was almost laughable. During manufacturing tempo pickup they had more opportunities to substitute somewhat better raw materials. Then something happened. The paint industry changed from Mother Nature's raw materials to man-made synthetics. It took time but the enlistment of available chemical resources paid off in greatly improved product possibilities on which the surface had merely been scratched.

The paint industry always did and still does try to consolidate its field position with product trade names. This applies to raw materials as well as to finished paint products. By ignoring many trade names and the accompanying ballyhoo, the paint testing laboratories are forcing paint manufacturers to concentrate on product performance. In so doing the users' laboratories have unconsciously gone over to the side of paint in an unplanned battle against vitreous enamel.

There is the story of epoxy resin base paints. These resins are being

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". . . and I say vitreous enamel is much better looking than any organic coating, and I can prove it! Just wait until I send these to the laboratory and find out which is which!"

used as modifying resins and as solution vehicles for many of the new industrial paints. Then there is the story of the silicones which are also cutting deeply into the business when special performance features are required. Newer than any of them are the latest phenolics and their combination with the epons such as General Electric's new Methylons which form complex phenolic combinations that are actually outperforming vitreous enamel in a great many instances.

Some of these Methylon coatings have done such incredible things as protecting untreated aluminum for as much as 13,000 hours without failure of the coatings in conventional salt spray exposure. Some cured Methylon coatings on steel have actually been submerged in acetone for a period of two months without change. The Methylon res-

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ins combine readily with other resins and resin combinations to impart film properties that cannot be found in any other coatings. In fact it now appears that all of the common resistance properties have been greatly increased by the introduction of this new resin to the paint industry.

More Improvements to Come in New Materials

Considering that these new resins and combinations are still in their infancy, we have a right to predict that many new goals will be reached very soon.

Every new resin making an appearance for this important paint industry has its draw-backs at first. Vehicle color is a common problem with new resins. However, as we look back over the years of paint vehicle development, the problem is a common one and it will be licked as it always has been in the past. First they will find experience in application as functional coatings. Next they will probably be found to be indispensable resins for undercoats. The next application will undoubtedly be in the field of color finishes, and finally they will be usable as resin bases for white enamels. The end toward which industry appears to aim is improved one-coat applications with properties beyond the present multi-coat systems.

Finishes for Containers; A Proving Ground

Another place where new resins find a good proving ground is in the can coating business. Cans other than food containers are normally coated and it goes without saying that it is no easy job for the coating material. The metal, which itself does not accommodate good adhesion, is coated before forming and automatic soldering. Some pretty strange and corrosive products are being shipped in coated steel, tin-plate, and leaded metal containers.

Steel drums are presently lined with synthetic resin coatings where tin plate was previously inefficient. Here again the new Methylon coatings are playing an important and exciting part. All of this has another great advantage for the paint industry. These resins so used are of sufficient volume to stabilize the price before it becomes a competitive resin for the pigmented coatings trade. It has for the most part passed the guinea pig stage and is well on the road to success.

Appliance Finishes . . . . Non-Toxic; Odorless

The further we go in trying to use organic coatings where vitreous enamel was previously used, the more complicated it becomes. For example, practically all paint materials in use 15 years ago were either of the toxic variety or they gave off objectionable odors in their so called dry state. Presently organic odorless, non-toxic coatings are being used as food compartment coatings in refrigerators and food freezers. This feature, to a great extent, is due to more complete conversion of the resins in the relatively short baking cycles presently used. A paint manufacturer may possibly survive an error in one year's model of automo-

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All in all, you can't match the benefits that accrue to Detrex customers. And that is the reason why industry prefers equipment that bears the name Detrex . . . it is truly the value sign in solvent degreasing.

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bile but he could never survive an error of odor in one year's model of food freezer, nor could his freezer manufacturing customer, for that matter.

Some of the newest phenolic epon resin combination paints have demonstrated remarkable resistance to compounds previously used for strengthening paint removers. Coated panels, as previously mentioned, have been submerged in acetone for a period of two months without effect or even slight change when compared with an unexposed standard. It follows then that any solvents with less solvent action than acetone will not affect them either.

Courageous Departures From Long Established Practice

Some of the new white silicone enamels exhibit a gloss even more pleasing than vitreous enamel. Also, some of the newest silicone combinations have exceptional heat resistance in the form of white enamels. They have been exposed to 250° C. [482° F.] for 250 hours with no noticeable change when compared to an unexposed standard.

Aside from refrigerator and freezer liners, washing machine and dish-washer tubs also have been produced in volume with interior organic coatings. The field service review of these units indicates that it is a very successful application. Strangely though, the product manufacturer's principal worry about the use of organic coatings as tub liners is that his competitors may use the information to his disadvantage in advertising. Everyone seems to want to do it, and it seems to be a race to see who will do it last rather than first.

At least one manufacturer has had the courage to try the idea of putting a good synthetic enamel over a ground coat of porcelain. The first thought, of course, is that paint will not stick to porcelain. It does though, and the combination has been in production for several years. The object is to get vitreous enamel protection and a pleasing white finished appearance without the high cost of the white coat normally accompanying vitreous enamel.

One of the strongest uses of vitreous enamel is on electric and gas ranges for both the cabinets and the cook top. Presently many ranges are being built as a drop in part of a unit kitchen, with no vitreous enamel other than the oven liner. There is a noticeable increase in the use of unit kitchens in the building trade. It is quite obvious then that the housing for the unit has an organic finish, as the heat problem is less than with a conventional range.

Stronger Strippers Needed to Remove New "Paints"

Most of the present day paint strippers, both hot and cold, are lacking in desired properties. This is another indication that organic finish properties have been improved more rapidly than was thought possible by the stripper manufacturers. Most of the strippers aren't good enough any more.

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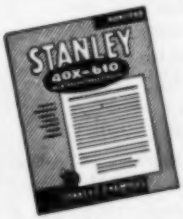

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more alkaline resistant coatings has decided to wait until the stripper manufacturers begin to catch up. His stripping time and cost have become a bottleneck. More of the newer coating properties may be found in the undercoats, and this is indicated by the action of the strippers. The top coat is quickly destroyed and leaves the surface in small broken sections. The undercoat requires longer exposure and eventually comes off in sheet form. Sometimes it is necessary to use mechanical means to remove the prime coat from the edges of some of the parts.

If a good all-purpose stripper were available it would be in great demand. It would keep the stripper business in the hands of the chemical material suppliers. At present some of the paint manufacturers are making extensive studies concerning the advisability of going into the stripper business.

Of course all of the finish progress is not confined to the paint industry. The vitreous enamel laboratories have developed higher hiding enamels that can be applied without a ground coat. More acid resistance has also been added. Present day vitreous enamel coatings have greater flexibility than previous ones, but the progress has been slow and little.

More progress in vitreous enamels has been rumored and it is now mentioned that more flexible glass and very low melting points are in the offing.

Some paint manufacturers may be suffering from volume reverses because of the new high efficiency automatic application methods. For years a considerable volume of purchased industrial paints were lost through the exhaust stacks. This has merely provoked the industrial paint manufacturers into more competitive coating developments.

The real big volume of industrial finishes has belonged to the paint family ever since the automobile—and that industry alone is enough to keep many paint manufacturers very happy. The house paint business doesn't belong in this discussion except as a means to help educate the public into realizing that there is something else available besides paint and porcelain. They have learned to like the term baked enamel and realize that they are not talking about porcelain.

Paint users enjoy another big advantage in industrial automation. A single conveyor chain can carry work from fabrication right through washing, phosphating, painting, baking and assembly.

Present improvement trends in industrial painting are to apply higher solids by automatic methods. Because present one-coat systems are outperforming earlier multi-coat systems—this is partly responsible for more one-coat high solids automatic applications.

Some industrial manufacturers are buying pre-coated metal and are forming their products from regular coated stock. The finish or prime coat can be rolled onto the stock at the mill without losses.

All through industry the cry is for more automation, lower inventory, and lower production cost to result in more products for the public at a price which they can afford to pay. [END]

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The spray guns operate only when they are directly over the product. Each turns on automatically when it reaches the edge of the product and shuts off as it leaves. The length of time the guns are in operation can be changed while the machine is operating.

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In addition to the Rotary Unit, Binks offers the Automatic Reciprocating Machine and the Automatic Spindle Machine. Virtually any product can be finished automatically with one of these three machines.

FOR FURTHER INFORMATION

If you are interested in automatic finishing, Binks will gladly analyze your operation and make a specific recommendation. There is absolutely no obligation. Just write to the address below:

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BINKS MANUFACTURING COMPANY

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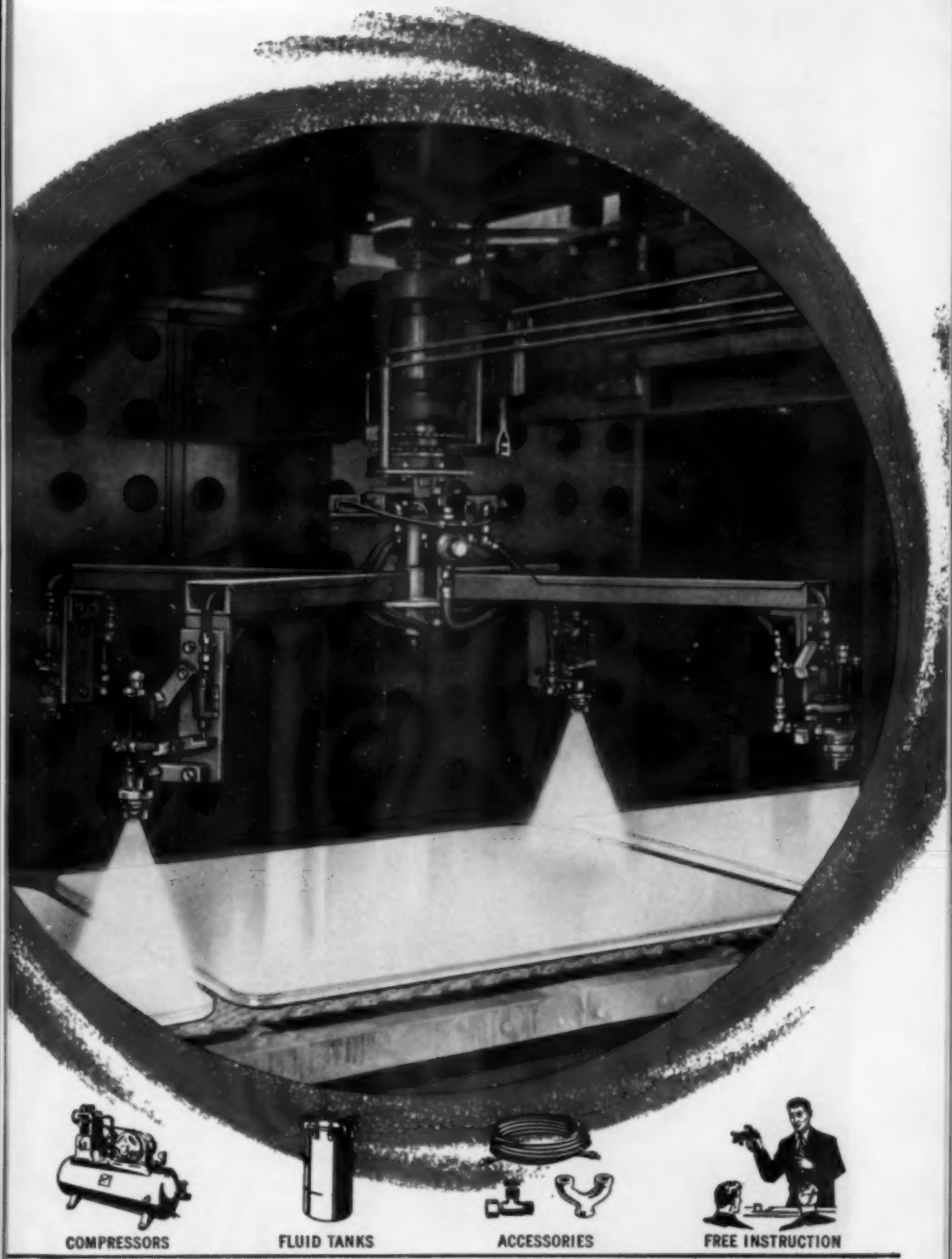

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SEE YOUR CLASSIFIED DIRECTORY

Furniture Show in Chicago

BY ROSALIE FLANK

Curvesome comfort is exemplified in this summer-time furniture shown at the winter market at the American Furniture Mart. Pink is the new color in outdoor furniture. Lloyd Mfg. Co.

Because of the interesting combination of materials, this two-piece room divider can be used in a variety of casual settings. The buffet is of rich walnut and informal rattan, and has door fronts of pigskin tile. The removable deck section has sliding doors of rattan plastic laminate sheeting. Designed by John Wisner, Ficks Reed Co. in Merchandise Mart.

UNANIMOUSLY acclaimed one of the best peacetime markets, the 1955 Winter International Home Furnishings Market at the American Furniture Mart and Merchandise Mart in Chicago closed its two-week run, from January 3 to 14, on a note of optimism and high confidence over the future of the business.

All indications were that dealers were buying pretty well across the board, with volume heavier than the last winter market and an an-

ticipated business increase of at least 5% in the months to come.

Business recovery in 1954's last half was given as one of the reasons for the tremendous renewed interest in home furniture, with continued home building, the growing juvenile population, increase in marriages, higher incomes and more "spendable" money—all contributing factors. The higher educational and taste level, as well as the demand stimulated by watching television, were other significant influences cited by business leaders.

Retailers are expected to continue buying for immediate needs only, but less cautiously under the more favorable business trend.

Price boosts averaged about 3% for some of the major furniture manufacturers, although an increase of from 2% to 5% had been predicted by trade sources prior to the market opening.

Beautiful Styling in All Price Brackets

The most significant influence felt at this market was the beautiful styling in all price brackets. It means that the buyer can find what

Ebony lacquered chests from the Espana collection created by Dorothy Draper and shown at the Merchandise Mart. Each chest has 3 large drawers with molded front panels and bright brass pulls. Trim is gold. Stools are in Castilian red lacquer from Heritage Henredon.

Beautiful Effects

are achieved on household items with these new **RANDOLPH FINISHES**

An exciting profusion of brass, wrought iron and wood products are bringing decorative magic into American homes. The glints, tones and colors that are helping to make sales for many of these items are the result of a wonder-working new series of Randolph Finishes especially developed for the latest trends in home decoration.

These are among the finishes we are introducing for this new era of beauty in the home!

CLEAR LACQUER for BRASS # 8000

Excellent performance in dip or spray application. Flawless adhesion on polished surfaces.

WROUGHT IRON BLACK LACQUER

Spray or dip application. Excellent adhesion.

WOOD LACQUERS

New additions to our Wood Lacquer line are a new Water White Clear Lacquer and a High-Solid Lacquer for cold application; rubs well, good cold check performance.

Write us today and tell us your individual needs! We are specialists in the "custom-finish!"

LACQUERS
ENAMELS
DOPES
THINNERS

Randolph

PRODUCTS COMPANY
CARLSTADT, NEW JERSEY

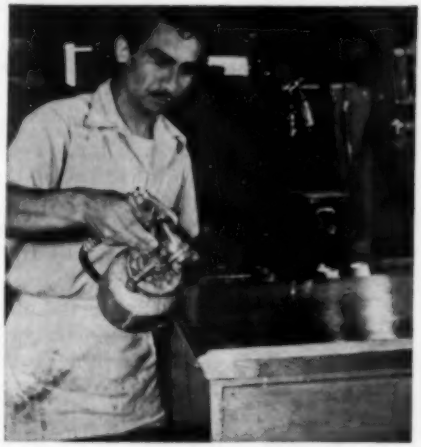
Inspired in the Orient, is this bamboo group shown in The Merchandise Mart. A combination of pecan woods and mahogany are painted jade green for drawers and panels; remaining parts are in the bamboo color. Pulls are brushed pewter. Drexel Furniture Co.

the buying public is looking for at popular, moderate, custom and specialized levels. Today less than 1% of the exhibits can be dismissed in the "unclassified" category.

Contemporary styling, the modified modern that has evolved over the past 20 years, continues to dominate the industry, the new samples relying on new finishes, combinations of materials, foreign influences, interesting trims and new functional styling to distinguish individual lines.

Following closely on the heels of contemporary lines is continued popularity of French Provisional in modified form, distinguished by its finish and trim. While the consistency of good styling was the first overall impression of the market, news in new finishes which individualize these new styles was the outstanding feature of the winter market.

Never before has the market been characterized by the use of such a variety of new finishes nor by the use of such rich, warm colors. Color has gained momentum until it has



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Lacquer speeds finishing operations at furniture factories, makes touch-up a snap at retail outlets. The versatility of this fastest drying of all protective coatings makes it ideal for modern, high-speed production methods.

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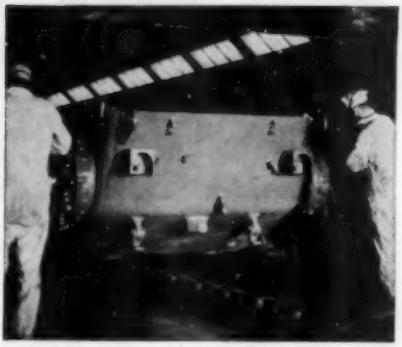
Castings which must be temporarily stored or shipped long distances before finished machining is done are protected against rust quickly and economically by a single coat of lacquer.



A SPEEDY FINISH

A two-coat lacquer finishing system not only kept this M-48 tank assembly line moving at top speed but has saved taxpayers over $1,000,000. It's a good example of how lacquer research pays off in dollars and cents.

For further technical or marketing information on these or any other developments in lacquer-type coatings made from nitrocellulose, ethyl cellulose, cellulose acetate, or Parlon® (chlorinated rubber), write to:

Cellulose Products Department
HERCULES POWDER COMPANY
928 Market St., Wilmington, Del.

CL-54-7

become the dominant influence. This, combined with fabulous variations of plastic and metals, has given new drama to the home furnishings picture.

Substantiating this color note, the Good Design exhibit at the Merchandise Mart, sponsored by the Museum of Modern Art, described the exhibit as "characterized by the use of much warm color."

According to Edgar Kaufmann, Jr., Director of Good Design, "Warm color is the common denominator of approximately 400 objects selected for the 1955 Good Design show. Much of the color in the new selections is bright and clear; even appliances have touches of brilliant color; and plastics appear in new, more useable colors. Greyed and muted colors, natural or beige tones, popular in past seasons are less frequent, while black and white or similar dark and light contrasts run a close second to brilliant primary colors."

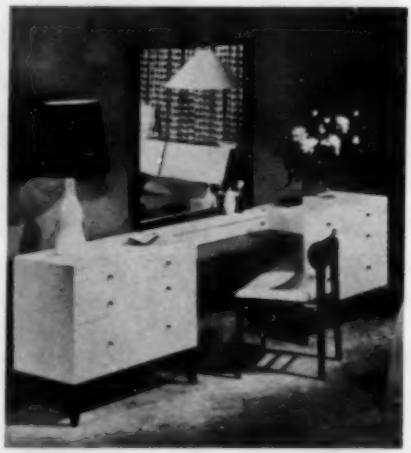
Variety of Popular Colors for Spring

Following the color theme even further, House & Gardens 1955 color show based on the theme "Spring Means Color" opened at the Merchandise Mart in Chicago in conjunction with the winter home furnishings show. It introduced merchandise in the 1955 colors. The 1955 current colors include mist green, emerald green, carnation, flame, clover pink, antique white, gunmetal, cardinal, Cerulean blue, terra cotta, citron, Dresden blue, green olive, sky blue, mustard, dove gray and persimmon. Decorator or advance colors include watermelon, bamboo. lilac, cantaloupe, mocha, nasturtium, dark bronze, Siamese pink, middy blue, suede brown, lemon peel and bitter green.

Since color and finish played such an important role in the winter show, it is interesting to follow through to see just how this color was used in the various phases of the industry.

Pink Tones in Many Lines; Marble Tops Shown

Darling of the casegoods industry was the new pink tone, a refreshingly new approach to the old problem of lighter colors. Making use of the new pigmented paint which changes the color of the



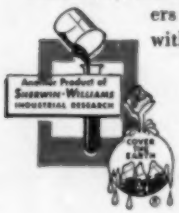
Part of a carousel bedroom group designed by Merton L. Gershun. A creamy off-white lacquer base is flecked with jet and gold, and accented by black porcelain pulls and black lacquer trim on base and mirror frame. Two-level desk-vanity with slate Panelyte writing surface and sliding doors can be suspended between single bases as shown. Spacious bed-bar has drop panels. American of Martinsville. Merchandise Mart photo.

Having hard-to-track-down finishing problems? Maybe it isn't the fault of the stain, nor of the filler. Maybe it isn't the sealer, nor the top-coats, either. Maybe it's the *combination* of several unrelated materials, each excellent, from several suppliers!

Many of today's most troublesome and difficult-to-trace finishing problems are caused by seemingly compatible materials that don't *stay* compatible after products are finished. And the cause of the problem can't easily be ascribed to any one material or source.

That's why, more and more, manufacturers find it pays to be *sure*, with *related* finishing materials for the *whole* system from *one* dependable source. From stain to finish coats, Sherwin-Williams Furniture Finishes provide a single source for all the materials needed in any system. No question how materials will react with each other with aging or exposure. Relationships of formulations are known . . . results assured. Ask for recommendations on your requirements.

And check, too, on the help and experience Sherwin-Williams can offer you on color-styling your lines in keeping with latest color trends. Call, wire or write The Sherwin-Williams Co., General Industrial Division, Cleveland 1, Ohio.



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Finishing

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Ever notice how a file cabinet gets kicked around? Yet the same cabinet that's slammed and banged daily in a bustling business office must *hold* its "like-new" look for years to keep office appearances up . . . expenses down!

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Already more than 12,000 Du Pont finish formulas are serving industry. Perhaps a Du Pont finish can help you improve or develop a product—cut your production costs. For complete information contact the Du Pont sales technician in your area, or write: E. I. du Pont de Nemours & Co. (Inc.), Finishes Division, Wilmington 98, Delaware.

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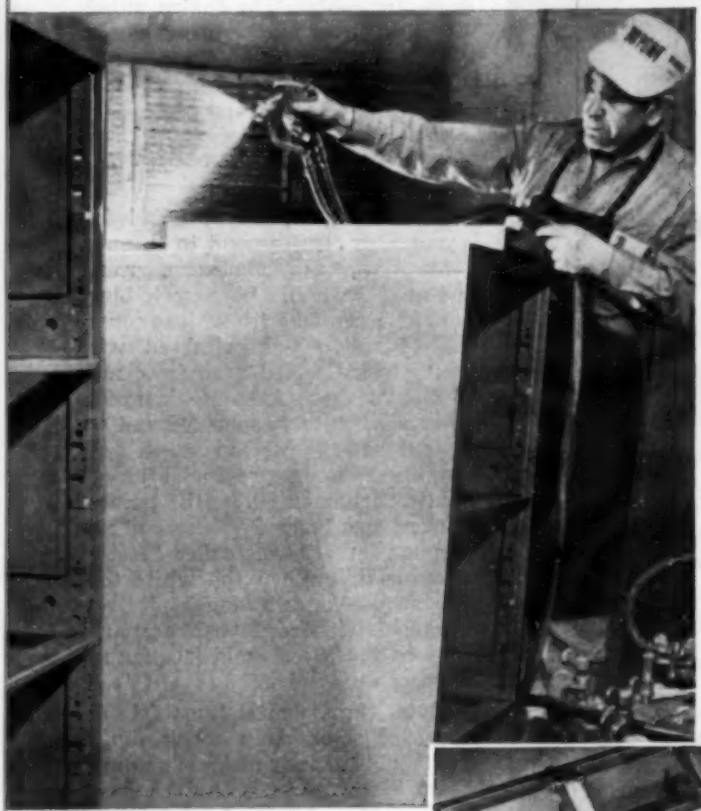
DULUX Mar-Resistant Enamels are special satin-sheen enamels. They do not "gloss up" under abrasion or scuffing. This property makes them especially well suited for metal office equipment, partitions and many other metal items where unusual mar resistance is desired. They are available in any gloss between 10 and 70 ASTM.



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ABRASION TEST. Abrasion resistance of DULUX is measured at Du Pont by constant friction of these weighted glass disks. The abrasive surface can be varied to simulate different field conditions.

Dining buffet from a new Trans-East solid cherry collection. Consider H. Willett.

wood on which it is applied but permits the grain to be seen, the market showed many interpretations of the pink tone. In some instances, provincial type bedroom sets were given a soft pink enamel and were trimmed with gold.

In the pink-toned wood grain group, the lighter more delicate shades of pink were received with greater acceptance than those with a heavier touch. One of the large nationally known lines showed a dramatic bedroom and dining room group in crystal pink on crotch mahogany with white plastic insets. Ice pink mahogany made its debut in another name line; Ballerina pink in still another.

The pink wood-grain finish also was stressed in occasional lines, lovely new cocktail and end tables in a soft pink, making lovely companion pieces to large California type pink sofas. The pink gave a dramatic contrast to chairs unholstered in shiny black quilted chintz. Marble and imitation marble tops of every description were used on every type of occasional piece.

Black and White Trend; Strikingly Effective

The black and white trend followed as a close second to the new pink. White plastic bedroom groups accented with black enamel, black enamel accented with white or charcoal, black oak highlighted with white insets added a staccato note to the market. In some instances the stark white was shaded and appeared as off-white in paint, or a pumice tone on provincial pieces. White ornamented with painted flowers was termed "Venetian"; in simpler form it was called "Italian Provincial." When the white took on a decorator's touch it was trimmed with confetti-like sparklings of black and gold lacquer underneath the finish.

Even the Colonial lines felt the touch of color. New maple dining room tables, many of them round in form, were striped with dark green, leaf green or black. Accompanying chairs were in colors to match the striping and decorated with contrasting color.

Turquoise Blue; Formica Tops; Egg Shell Leather

Turquoise blue was another color making a bid for attention in case goods and occasional lines. Many variations of the tone appeared. Formica tops in brown and beige, marble tops and eggshell leather were used on many of the medium toned woods, both in case goods and

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undercoats	**fillers**	**shellac**
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occasional pieces. New names such as tawny elm, sandalwood mahogany, cinnamon brown walnut, French walnut and soft-tone fruitwood were used to describe the new finishes. Black was dramatically used with these medium brown tones with striking effect, either as banding, trim or top.

Color alone was not the only news in the bedroom and dining room lines. Beautifully designed and finished hardware in metal, wood and plastic distinguished many of the new lines. In some cases the hardware was the focal point of the entire piece. Leather trims, caning, plastic in unusual designs and finishes, and new uses of metal all added to the appeal and salabilities of the new merchandise.

Wall to Wall Grouping; Tables of Many Designs

Emphasis on wall-to-wall groupings introduced new square corner sections, in many instances merely "shams," which gave chests a continuous line at right angles around a corner. Vanities and desks built at the same level as multiple chests designed to line-a-wall gave evidence of the new planning in furniture design. Room dividers have become standard equipment with most dinette and dining room lines. Many drop leaf tables were shown. More large cocktail tables following the form of new enlarged sofas—some round, some long, oblongs and triangles—were in the news.

Dining room sets with tops of plastic were introduced by manufacturers who formerly concentrated only on kitchen or dinette groups. Large tables, 42 x 60 x 84, with wood-grain plastic tops and tubular anodized black metal legs with brass tips, had matching chairs upholstered in washable plastic which resembled fabric up to the final touch.

A new type of curved corner table to be used with the new, large sectional circular sofas made news. Formerly found only in custom made groupings, the table may be used against the sofa, the curve matching the back curve of the upholstered piece. The table is 42-in. in height and is designed to accommodate a lamp. Other large corner tables, some 40-in. square are now appearing in volume lines. These tables are designed for "corner-continuity."

An illustration of dark and light contrast and new uses of leather. This drop-leaf dining table is banded in contrasting top grain leather. Note also the application of leather to the side stretchers and backs of the chairs. Heritage-Henredon in The Merchandise Mart.

Outdoor Furniture; Pink; Foreign Influences

Outdoor furniture featured pink in both metal and wood lines. Blossom pink, petal pink and pink frosting ran in competition to Siamese pink, geranium pink and

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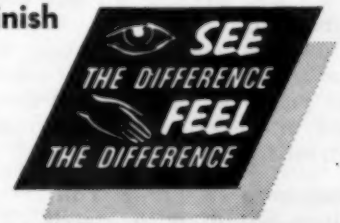


IF YOU MANUFACTURE FURNITURE, WRITE US FOR SAMPLES OR DEMONSTRATION

Perfection PAINT & COLOR COMPANY

INDIANAPOLIS 2, INDIANA

Chosen for the January, 1955, Good Design exhibition at the Merchandise Mart, the International Harvester Co.'s refrigerator can be decorated to match kitchen decor. Colored plastic coverings, in four basic colors, are available from the manufacturer with each "Decorator" model.

watermelon pink. Wrought iron, "guaranteed against rust for 10 years," continued to be popular but the satin black color has been augmented by citron yellow, ice green, pink and turquoise blue. Redwood, with gold anodized aluminum frames, was a popular newcomer.

The foreign influence was felt in the design of all types of furnishings. The Spanish influence complete with brilliant colors; Japanese with Saiki stools for T. V. viewing; Asiatic, Danish, Chinese, Italian and French—all left their impressions.

Pink has now moved into the number one spot in kitchen colors, with yellow second, and red third. Black, white and grey are favored contrasting colors.

Appliances in Color Too; Colors Supplied to Match

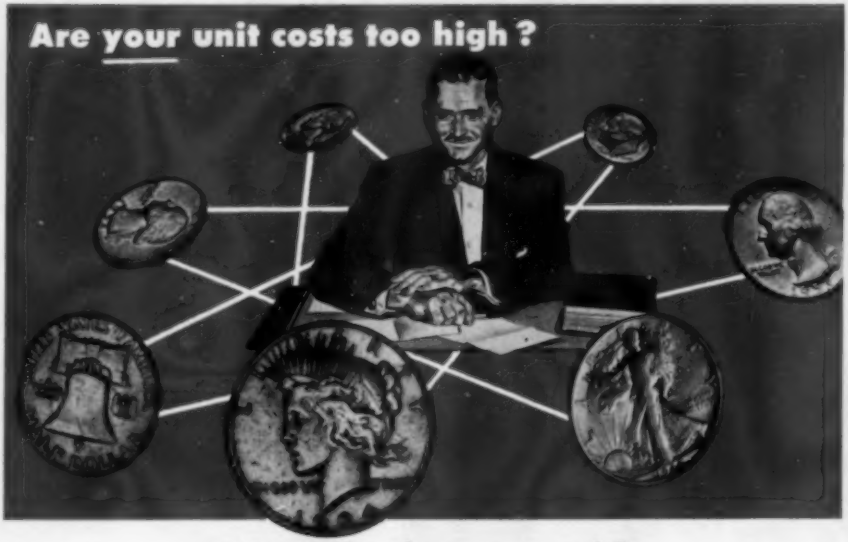
Many new types of utility carts, bars designed to blend with any period interior, double duty indoor-outdoor type tables and duo-purpose pieces indicated that emphasis was placed on utility as well as beauty when the new lines were created.

Appliances joined the call to the colors, the new refrigerators, ranges, freezers, and allied products being introduced in beautiful new colors. Television sets appeared in small, compact cabinets, one manufacturer showing cabinets in Siamese pink. General Electric who, along with most other large appliance manufacturers, featured built-in ranges as well as standard models, emphasized petal pink, cadet blue, turquoise green, canary yellow and woodtone brown as its new standard kitchen color. Kitchen and laundry paint based on new "alkyd" resins will be packaged by large retail paint outlets in the new standard colors to permit kitchens and laundries to be finished to match the appliances.

Lamps stressed color, in harmony with the surroundings for which they were designed, and again pink stole the show. Enameled, painted and lacquered finishes emphasized the new colors.

Hopkins Not With I-Sis Chem.

The short news story in January 1955 issue, page 111, to the effect that Paul E. Hopkins had joined I-Sis Chemicals, Inc., Stamford, Conn., is in error. It should have been to the effect that Mr. Hopkins is with The Chemical Coating Corp., Rocky Hill, Conn.



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Cabinet makers supplying these National leaders, rely on Spruance Quality to meet the exacting requirements demanded by the T-V industry. From start to finish — Spruance products are employed by these master craftsmen — not only because of the superlative beauty achieved—but also because of the economies effected in processing time and increased production performance.

For 50 years the makers of the finest furniture — cabinets and art wood products have relied upon Spruance finishes to meet the most exacting specifications.

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Die-Cut Adhesive Masks

Please send us the name and address of a supplier of die-cut adhesive masks as shown on page 80 of Nov. issue of *Industrial Finishing*.—*C. Co.*

See advertising pages of this issue. —*Editor.*

Wood Graining

Will you please advise us as to where we can purchase wood graining equipment, such as is used by Simmons and other steel furniture manufacturers? We are now producing metal bedroom sets with baked enamel paint finish.—*U. Mfg. Co., Honolulu, Hawaii.*

In a letter we are naming five concerns (one in Calif.), who can supply what you want.—*Editor.*

Coating for Wood Forms

On page 91 of Dec. 1954 issue, we notice an inquiry from H.H.M. concerning the finishing of Plywood Concrete Forms.

We manufacture "Form-Glaz", a high quality lacquer which has found widespread acclaim as a coating for concrete forms. We would appreciate your advising H.H.M. concerning this material or furnish us with their name so that we may contact them direct.—*National Chemical & Plastics.*

Information supplied.—*Editor.*

Tumble Finishing

We are interested in developing a method of tumble finishing. One of your subscribers has given us tear sheets from an article on this type of finishing, as included in your September and October 1941 issues.

Mentioned in the article is an excerpt from another article on tumble finishing in your November 1940 issue. If there are still reprints of the November 1940 article, we would appreciate receiving one copy.

If possible, we would like to have two copies of your magazine, one addressed to our factory supt., and one to our purchasing agent.—*G.K.*

Information supplied.—*Editor.*

Dip Coating Technique

We are interested in helping one of our customers improve his dip tank and dipping operation. The company manufactures a line of wrought iron furniture. In checking through our back copies of *Industrial Finishing* we noted an article in August 1953 issue, on page 81, regarding a previous article on "Air Bubble Trouble in Dip Tanks" which appeared in March 1952 issue. As I don't have this article I am wondering if you still have one.

If you have any other article that would apply to dipping the above mentioned articles with a black lacquer, we would appreciate receiving copies of same. This company is particularly interested in a pump and filtering system with a method of

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Eye appeal put these anxious people in this frenzied buying mood..."*make them like what they see... and they'll buy it!*"...is probably the most basic of all merchandising axioms . . . this is where your Egyptian Finishes Specialist and the ingenious Egyptian Lab. Technician behind him can assist you most. Call on their highly specialized finishing knowledge to help you make your product look better...wear better...sell better.

Talk to them about your finishing problems on the production line too. Often their suggestions have broken seemingly impossible bottlenecks...lowered overall finishing costs and increased production. They know and will tell you the specifications for finishing any Government product.

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Box 444, Newark 1, New Jersey
Plants: South Kearny, N. J. • Lafayette, Ind.

circulation. The tank in question holds 325 gallons of lacquer at present but we don't think they actually need one that large. This company, by the way, will probably make their own tank and buy a circulating pump from a reputable manufacturer.—*S.S.Co.*

We have published several articles about dip coating as a means of applying paint and lacquer coatings to various parts and products, but the demand for tear sheets and reprints has been so great that our supply is almost exhausted. However, we are sending you a reprint of the 11-page illustrated article, "Coating the Surfaces of Products by Dipping", which appeared in Nov. 1952 issue of this magazine.—*Editor.*

Electric Circuit Paint

I am in search of a paint having electrical conductivity characteristics, one that could be used in printed electronic circuits. As you probably know, the conventional way to print a circuit is to silk screen an ink over a bakelite board coated with copper. The board is then soaked in a ferrous oxide solution which removes all copper from the board, except for what is protected by the ink.

This process, while extremely reliable, is costly. The printed circuit application, which we have in mind, does not require the extreme reliability and we feel that we could use a material which would have as much as 20% or 30% more resistance than copper.

Do you know of any such material? The only lead that I have been able to develop so far is that some such material was developed by the Government for use by the armed services. —*K.C.*

In a letter we are naming six concerns which, we believe, can supply paints or coating materials that have electrical conductivity characteristics. —*Editor.*

"We can't get married in June. I'm going to the Industrial Finishing Show in June!"

Flock Adhesives

On page 84 in December issue of this magazine there is an article discussing "Flock Adhesives". Would you please give us the address of the manufacturer, which is referred to as the Durolastic Company?—*K.Mfg.Co. (Heating Equipment).*

It's 25 E. Main St., Sussex, N.J. —*Editor.*

Roller Coating Data

What publication would give us a good treatise covering finishing by roller coating? We are interested primarily in obtaining information about the roller coating of the edges of plywood and hardboard with lacquer and enamel. Would like information covering the types of machines used in

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the ORIGINAL time-tested strip-coating

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Tri-State Spray Equipment & Compressor Co.,
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In Europe:
Jonson & Nicholson, Ltd., London, Eng.

roller coating, the finishing materials, and handling and drying processes. *Store Kraft.*

We have published several articles about roller coating in past issues of *Industrial Finishing*, but the demand for same has been so great that our supply of back copies and reprints is almost exhausted.

In a letter we are referring you to several manufacturers of roller coaters. Some of these companies have catalog literature about roller coating. We hope to publish another article on this subject soon.—*Editor.*

Screen Process Stencils

Would you kindly supply us with the name and address of a company which could furnish us with either stencils or silk screen (or both) for furniture decoration?—*M.H.D.*

Information sent by letter.—*Editor.*

"That's a beautiful color you arrived at—considering you tripped over a bucket while carrying all those colors."

Film Thickness Gauge

Please send us the address of a firm making Lacquer Film Thickness Indicators.—*A.C.Co.*

We suggest Gardner Laboratory, Inc., 4723 Elm St., Bethesda 14, Md. —*Editor.*

Roller Coater's Address

We would appreciate receiving the address of The Union Tool Corp., which manufactures a small roller coater, as mentioned in the Letters from Readers section on page 74 of January issue.—*C.R.Co.*

It's 314 E. Market St., Warsaw, Ind.—*Editor.*

Metallic Finish Wanted

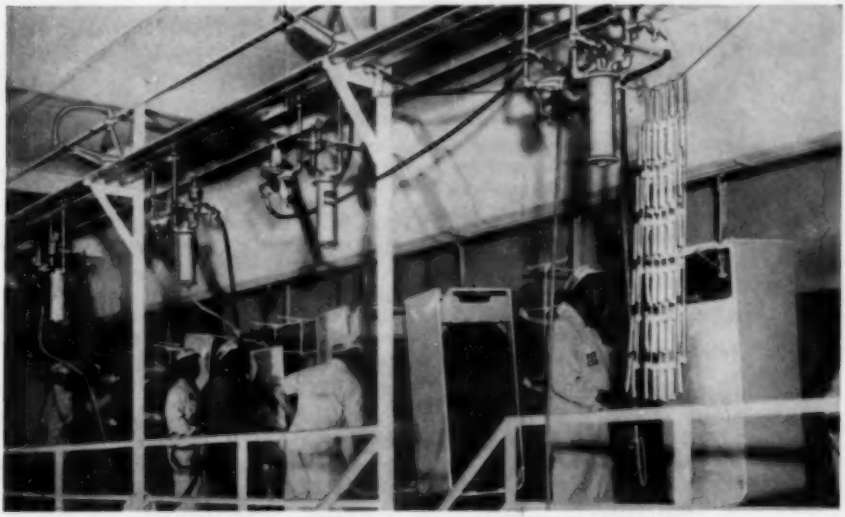
In Dec. 1954 issue, on page 86, a firm requested the names of suppliers of materials and service for a "durable metallic finish" which would closely simulate brushed brass or silver. If this information is available, would you please forward a listing to us?—*Metalcraft.*

In a letter we are sending you the names and addresses of several concerns that can supply what you want. —*Editor.*

Roller Edge Coating Too

We're trying to locate the manufacturer of a roller coating machine that will help solve our finishing problem. Here's the story:

We make a wood-back advertising thermometer and believe there is a roller coater that will not only coat the face of the wood but the edges as



CUNO FILTERS insure finer finishes at this appliance plant

Better finish, fewer rejects

in spraying and dipping operations

That's why more and more Cuno MICRO-KLEAN and AUTO-KLEAN filters are being selected by the finishing departments of such outstanding firms as Frigidaire, General Electric, Avco Manufacturing and Servel.

MICRO-KLEAN removes fine contaminants from spray paint; oil, moisture and scale from air lines. MICRO-KLEAN is also ideal for periodically cleaning dip tanks of sludge and other foreign particles.

AUTO-KLEANS remove skins, dirt, chips and scale before they harm your finish. Contaminants collecting on strainer are removed without stopping flow — either by motor drive or manual turning of handle.

Let us help *you* get finer finishes at lower cost. Write Cuno Engineering Corporation, Dept. 29, Meriden, Conn. 4.15

CUNO ENGINEERED FILTRATION

well. The edges, by the way, are rounded off in some cases and beveled in others. The largest wood back we use is 4x15-in.; none is more than ½-in. thick.—*B.D.Co.*

In a letter we are giving you the names and addresses of several manufacturers of roller coating machines. One or more of these may be in position to supply what you want—or perhaps build a special machine for coating your products.—*Editor.*

Strippable Coatings

In the January 1955 issue, on page 78, we notice reference to Strippable Coatings, and that you furnished the names and addresses of several manufacturers of strippable coatings in answer to the inquiry.

We wonder if our company or the name of our parent company, Thompson and Co., is included in your list of Strippable Coating manufacturers. We have done considerable work in this particular field and would appreciate being included in your records as a source of supply.—*Specialty Coatings, Inc. (Divn. of Thompson & Company.).*

"I thought this paint was odorless!"

Crack Filler Wanted

We are manufacturing jalousie door rims made of kiln dried Douglas fir. Many rims have to be patched due to defects such as splits, checks, etc., and we do not have a satisfactory spackle compound. Will you please send us a list of firms to whom we can write and perhaps locate a compound that will be suitable for our use?—*W.I., Inc.*

What you need is a regular wood crack filler and patching compound. In a letter we are naming several concerns who can supply this material. —*Editor.*

Al. Silicone Paint and . . .

In Dec. 1954 issue, on page 80, we notice A-R Corp.'s inquiry for names of manufacturers of Aluminum Silicone Paint. We can supply this product . . . .

We would also like to be listed as a manufacturer of Strippable Coatings for rust prohibitive and abrasion resistant purposes.—*Atech, Inc.*

To Paint Doll Eyes

In January issue, pages 76 and 78, we see an inquiry by the "H. Corp." regarding the painting of doll eyes. They expressed an interest in machines and masks for this purpose. Our company has made a number of machines, and hundreds of masks for the doll eye trade.

Would you give us the full name and address of "H. Corp.", so that we may send them further information? —*Finish Engineering Co., Inc.*

Mac's

THERMO-LAC FINISHES

The most modern air dry, low or high bake catalyzed synthetic wood finishes produced in recent years.

Available in a clear or satin finish, also in a full range of solid colors. Is non-yellowing.

The beauty of these finishes is not affected by boiling water, liquor, alcohol, or nail polish. Do not mar or scratch readily, are so tough that a hammer blow will only dent the finished wood surface. Will not cold check, print, soften or pad mark.

A burning cigarette does not blister or mark its surface after two or three minutes.

Mac's Thremo-Lac finishes have been used for many months in finishing production with complete satisfaction. They are high in solids, can be applied by spraying in the usual way, dry dust-free quickly and will rub dull or polish more readily than lacquer finishes.

Why not order a 5-gal. can at the drum price for testing? When ordering advise whether you wish the clear, the satin finish or describe the color desired.

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The Lawrence-McFadden Co.

Headquarters for Fine Finishes Since 1875

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Great day in the morning! How do you like the sunshine in *that* smile? *You* can feel *real* good about things, too — if you take from Rockford Varnish. The finishing materials we make — the lacquers, the paints, the varnishes, the specialties, or what have you — are limited only by your needs. We are set up to compound practically *any* kind of finish, in almost any practicable quantity. How about giving us a chance to "brighten the day" for *you* . . .

Affiliate: GORDON BARTELS CO., *Roller Coating Specialists*

Paint Specifications

Can you furnish or recommend a source of published inforamtion to aid us in establishing paint specifications for our plant?

Generally speaking our operation is such that we cannot afford to go into detailed technical specifications, nor do we have laboratory facilities to evaluate a highly technical specification.

Our interest is in a simplified basic specification which would serve to insure that we receive honest values in materials purchased, and one that will enable us to intelligently state our requirements and compare the offerings of various suppliers on other than a price basis.—*F.S.Co.*

I do not know of any published information pertaining to establishing paint specifications which would really aid you. First, it would have to be known what products are to be painted or finished. Many other factors would have to be considered for setting up specifications for the purchase of materials.

I presume you are interested in procuring data that would enable you to purchase materials on a quality basis, plus the cost per square foot, rather than on the incorrect idea of merely obtaining materials at the cost per gallon. Many quality materials, formulated to meet necessary requirements, are now on the market.

Specifications can be drawn up which would assist you if the product or products to be painted are known, and what curing and baking time and temperatures are available.

To properly evaluate material cost for competitive purposes, the proper controls should be established for the storage, mixing, application and measuring of wet and dry film thickness. The equipment required would be a No.4 Ford viscosimeter, or the Zahn viscosimeter, a thermometer, stop watch, and a film thickness gauge. It would also be well to have a Pfund wet film thickness gauge. It is presumed that you have available the proper agitating (mixing) equipment. Also, it is essential that the proper application technique is used, together with proper adjustment of equipment to keep same in working condition.

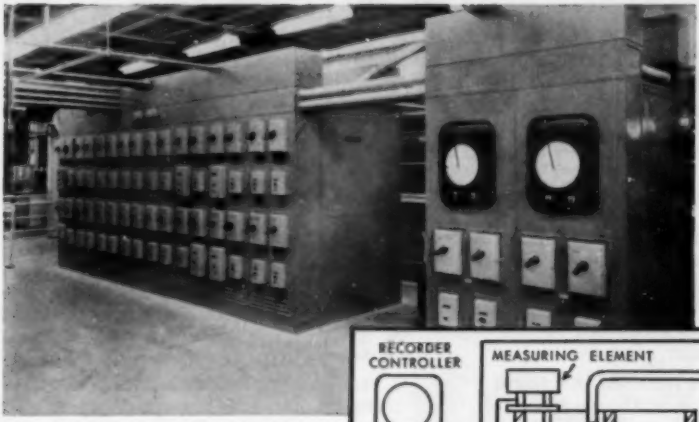
I would set up procedures for evaluation of the following: Curing; salt spray test; color; gloss; abrasion resistance; flexibility; impact; and adhesion. The cost of equipment would pay for itself, in many ways.

Once your material specifications have been drawn up and distributed to the paint sources of supply, there should not be any trouble in getting the required materials.

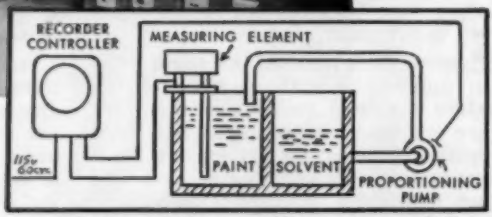
We must depend upon the integrity of the paint manufacturer, whom I have always found to be honest and cooperative.

However, obviously we must also be cooperative with the paint manufacturer. Too many times I have noticed where the paint formulator has known very little about what the requirements were, and when invited to see what the product was and how manufactured, he was able to go back and formulate a material to meet the required specifications. He can assist

General Electric solves control problems in flow coating with NORCROSS Recording-Controlling Viscometer



Norcross Recording-Controlling Viscometers are important in the 3,000 lbs. per hour fully automatic flow coating of electric range parts in the Louisville Plant of General Electric Company. *



Installation of Norcross Viscometer at G-E.

In flow coating or dipping operations, where the paint is reused, constant viscosity must be maintained by the frequent addition of solvent. Manually operated control of viscosity demands continuous supervision, which is impractical.

Automatic control by the Norcross Viscometer holds viscosity continually at any predetermined value by frequent additions of solvent, with readings recorded every 3 minutes. It also provides an alarm to signal any deviation from this value caused by solvent supply failure, faulty temperature control, improper paint mixture or any other factor. The continuous, *AUTOMATIC* accuracy of Norcross Viscometer control provides savings in labor costs, improved quality of finish, and often a substantial saving in solvent or coating material.

* Norcross Viscometers are also in successful use by the El Segundo California Division of Douglas Aircraft Company, Inc., in prime painting aircraft parts and by the Los Angeles Plant of the Chrysler Corporation in flow-coating auto body parts.

NORCROSS CORPORATION
Newton 58, Mass.
Southern Office: Charlotte, N.C.

you in producing a finish which will have sales and eye appeal, if properly controlled in your plant.—*C. Raymond Syer, Metal Finishing Consultant.*

Filling and Finishing Rough Edges

We have encountered a problem in one of our finishing operations and are wondering if you might help us arrive at a solution. We have contracted to paint the edges on a number of plastic top tables. The material consists of several layers of fir veneer with a Masonite bottom layer. These edges have been beveled before delivery to our plant.

Since the grain on the edges runs in different directions, some of the edges are in a rough condition. We are trying to secure a smooth final finish. However, we are looking for a production way of doing the job. We are wondering if there is some type of putty filler that could be sprayed on and sanded so that the edges would be ready for painting.—*G.P. Co.*

It is likely that the Masonite tops are finished in some manner somewhere along the line, either with a ground coat for design transfer and clear top coat, or perhaps a color coat followed by a clear top coat.

In either event a coat of filler sprayed on the fir edges would cause no trouble even though it might prove a bit messy. The filler could be sprayed, brushed on or wiped on with a rag, padded in, wiped off, sealed and sanded after suitable drying periods between coats. If any filler contacted the Masonite tops it would not cause any serious damage, for many TV cabinet makers are now sanding the Masonite surfaces and filling these surfaces just like a wood surface.

Another idea for filling and smoothing those rough edges would be to squeeze a thin putty out of a tube onto the edge, then knife scrape the excess, allow the putty to dry, and then scuff sand.

If the tube idea is not practical, it might be possible to place the liquid filler, heavy primer or thin putty in a shallow pan of sufficient size to accommodate the table tops, then holding the top vertically, dip the edge into the material. The edge could then be either wiped off or knife scraped to remove the excess.

The principle remains the same in all cases. You must get the filling material onto the edges, remove the excess, let the material dry thoroughly, sand the filled surface and then coat with either a pigmented material or a clear protective coat. What material to use and how to apply it will depend upon the ultimate finish to be put on, the contour of the edges and available material. Some of the work is bound to be a hand operation.—*P.C.B.*

Finish Consultant

We feel that we have come to the point in our finishing program where we need a complete re-evaluation. We feel that we need to sit back and take a fresh look at all our processes and methods of finishing. We feel that we should start from the very bottom in this look at surface preparation first; then we should look at the type of materials which we are using or maybe should use, then we should look at our methods of application, the number of coats, drying time, etc.

This study we have in mind is one which we cannot make ourselves without some outside help. We will require a finishing expert or consultant familiar with all phases of wood finishing.

Do you, by chance, know of a finishing consultant who could help in

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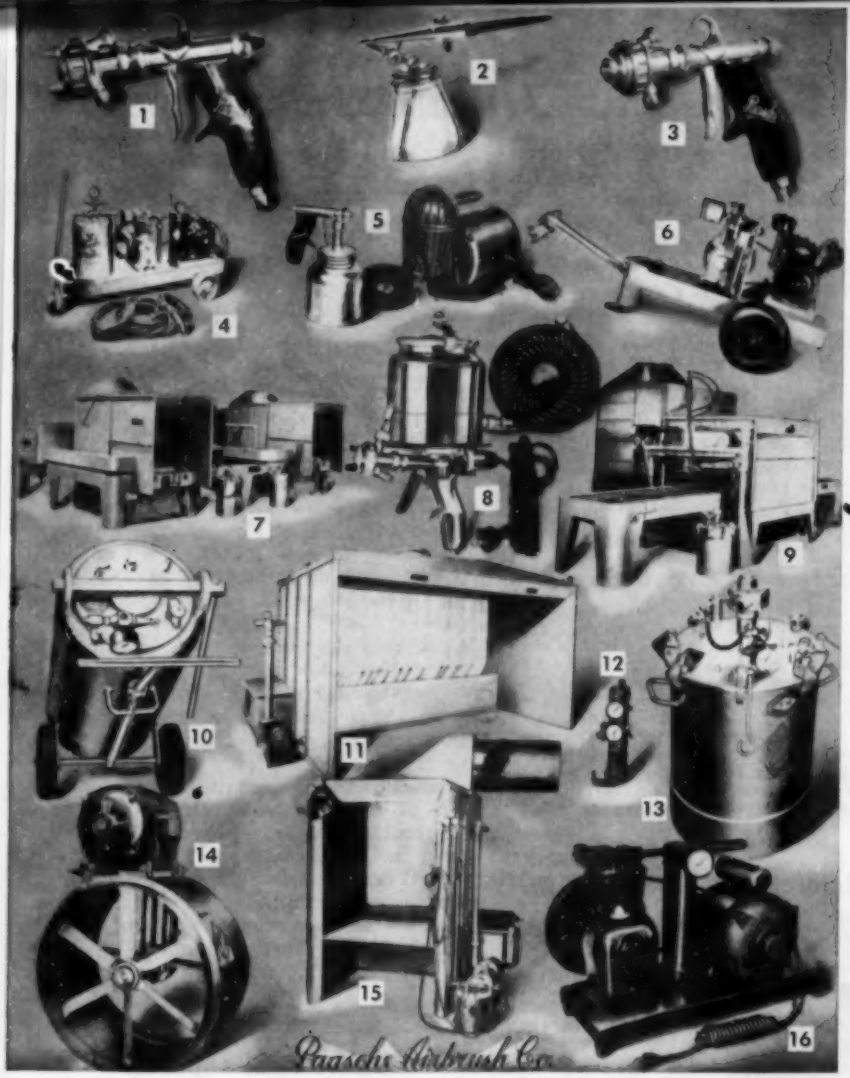
51 years of pioneering aircoating equipment



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11. The only self-cleaning water wash booth—pays for itself with savings of maintenance cost.
12. Complete line of air regulators, and water and oil airline conditioners.
13. F551 straight side safety cover fluid pressure tanks in 5 to 60 gal. sizes.
14. Highest efficiency ventilating units in ½ to 10 HP sizes.
15. Shelf type self-cleaning water wash booths in 3′ to 30′ sizes.
16. Complete line of air compressors from ¼ to 20 HP.

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Paasche Airbrush Co., 1909 Diversey Pkwy., Chicago 14, Dept. F155

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this? He should be a man who has had a great deal of experience in wood finishing and preferably with the finishing of soft wood, such as ponderosa pine from which some of our products are made. If you have knowledge of such a man or men, would you kindly send me their names and addresses.—*X. Co.*

We know several men who have the experience and general qualifications to handle such an assignment—but they are all employed full time. Perhaps some reader can suggest a consultant who might be available.—*Ed.*

Richardson to Raffi & Swanson

George W. Richardson has joined the laboratory force of Raffi & Swanson, Inc. His long experience in the manufacture of industrial finishes will strengthen the technical staff of the company in connection with its expnasion program at the new Wilmington, Mass., plant.

Mr. Richardson graduated in chemical engineering from Northeastern University, and except for military service has always been engaged in formulation work and control of coatings manufacture.

At Interchem's Research Lab.

Werner F. Goepfert has been appointed personnel manager of Interchemical Corp.'s central research laboratories in New York City.

In this position Mr. Goepfert will concern himself with the employment of laboratory personnel and with employee relations. He will maintain contact with colleges graduating technical personnel.

The IC research laboratories carry on basic research as well as product application studies for Interchemical's ten divisions. The Corporation produces industrial finishes, textile colorants, printing inks, and other industrial coatings.

Blushing Trouble

We manufacture occasional tables, and would appreciate information on a chemical or know-how to do away with blushing during very humid weather. We are using a retarder thinner but it is not doing the job.—*B. Furn. Co.*

Blushing can usually be stopped through the use of a suitable retarder. Your trouble could be caused by insufficient drying of one or more undercoats such as stain, filler or sealer. If these coats are not given sufficient drying time, all of the retarder you put in the top coat material will not prevent blushing in humid weather.

It is possible that your stain contains a "long" solvent such as a "slow" naphtha. If a slow naphtha or some other slow drying petroleum product is used in any of the undercoats, all you can do is to increase the drying period or install force dry ovens.

I suggest that you contact your supplier of finishing materials. His representative should be able to tell you about the undercoats you are applying. Perhaps your supplier will change the formulation of his material so that a reasonable amount of retarder, added during humid weather, will solve your blushing problem. —*L.N.J.*

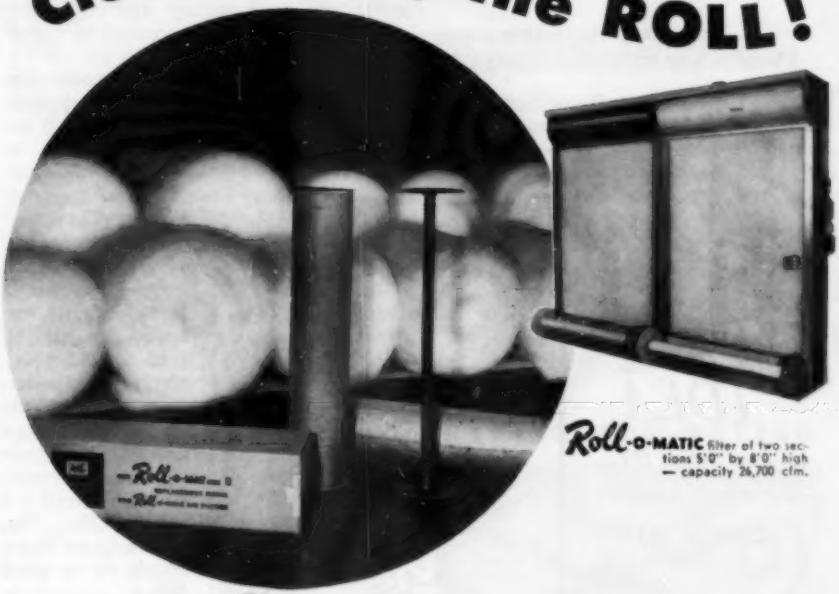
DeFilippis Joins Lupoline

Mr. Joseph R. DeFilippis has joined the Lupoline Automatic Polishing Equipment Corp. He has charge of the machine and assembly shop producing modern tumbling machines.

Mr. DeFilippis, a tool engineer with over 30 years experience in building machines, will put into good use his machine tooling and designing abilities. Mr. Joseph Lupo will be in charge of the research and development laboratories.

The company manufactures tumbling machines, tumbling machine parts and tools for the plastic industry.

Clean Air by the ROLL!



Roll-O-MATIC filter of two sections 5'0" by 8'0" high — capacity 26,700 cfm.

Magic Roll-O-MATIC Makes Once-a-Year Air Filter Maintenance a Reality!

Believe it or not, you're looking at ROLL-O-MATIC'S renewable media filter curtain before and after packaging for installation. Each of those fluffy, white bundles is a "blanket" of bonded glass fibers 5 ft. wide and 70 ft. long. Then—presto—when wrapped on a spool, it becomes one of the 13" diameter rolls shown in the foreground.

Equipped with this versatile media, ROLL-O-MATIC'S efficiency and economy is obvious. Mounted in roll form at top of filter, the media moves as a continuous curtain down the face of the unit and is re-rolled on a spool at bottom. Movement of curtain is controlled by an automatic time switch which introduces sufficient clean material to maintain the desired operating resistance.

Results? Field reports indicate *one roll* of this low cost material represents a *year's* supply for 18,000 cfm capacity. That's half the cost of disposable filters of equal capacity—and think of the man-hours saved!

"Clean air by the roll" can mean big cash savings for you. Get the facts from your local American Air Filter representative or write for Bulletin 248.

AAF herman nelson

American Air Filter
COMPANY, INC.

American Air Filter of Canada, Ltd., Montreal, P. Q. • 210 Central Avenue, Louisville 8, Kentucky

Protect Metal Surfaces Against Corrosion

Zinc chromate in thin coat; Phosphate coating; Wash primers.

EVERY year throughout the world, millions of dollars are lost or wasted because of one particular menace—corrosion. It may take the form of common rusting or oxidation on steel, to more complicated reactions with salt atmospheres or other air contaminants. It is no surprise that great sums of money are expended yearly in research to combat or minimize the evils of corrosion.

One of the methods of corrosion protection is the use of zinc chromate primers. However, as widespread as the usage of this material is, it is surprising to find that only a relatively few finishers know how to apply it correctly. In many plants heavy coats of zinc chromate primer are used. It is difficult for many to realize that only a relatively light coat should be sprayed. The thickness should be such that the base metal underneath is still visible. The old adage "too much of a good thing . . . .", is definitely true in this case. Too heavy a coat will decrease rather than increase the defense against corrosion.

Some manufacturers, in order to obtain a high corrosion protective value, resort to zinc or cadmium plating, with the appropriate chromate conversion coating. This is followed by a coat of a baking lacquer which acts as both a primer and sealer. The

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baking enamel which then topcoats the product serves as an instrument of both further corrosion protection and the sales appeal of good metal decorating.

The use of metallic phosphates is widely known in the finishing field. These materials are used to treat the metal prior to paint application . . . . to form an adhering phosphate coating. This film, which is deposited on the metal, serves a two fold purpose. It not only gives a high corrosion protection but also provides a firm bond between the paint and the metal for maximum paint adhesion.

From the laboratories of paint manufacturers and raw material suppliers has come, in recent years, the wash primer. This relatively new material was developed to insure a successful method of metal conditioning. For many years the cleaning and preparation of metals prior to paint application had been a stepchild of the finishing industry. While many recognized its value and importance, it was ignored or slighted in most painting operations.

Of course even today some plants are not equipped to adequately prepare metal surfaces for organic finishing. To bridge the gap and fill this void in technique the wash primer was produced. It should not, however, be accepted as a cure all . . . . to disregard all cleaning operations. Best results will still be obtained on clean surfaces.

Wash primers are applied in any normal conventional manner, that is by spray, dip or brush. Heavy films offer no advantage and are discouraged. The best application is a film of light to medium thickness and should not exceed about 0.4 mils.

This new primer material is basically a resin which has a high resistance to electrochemical reactions, chromate pigments of lead or zinc, and phosphoric acid. Thus, by the reaction

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which occurs between these components and the metal surface, a bond is formed which is actually part of the metal surface. For this reason wash primers will retard under-film corrosion and deterioration when any chips or breaks occur in the protective finish. As this material is acid in nature some care should be exercised in its handling. However, this should not be a deterent toward its use.

The job finisher or the head of a finishing department in a large plant will often be called upon by product designers for assistance in obtaining maximum results against corrosion. The answers he is able to give on these problems will, in many instances, determine the cost and salability of the product. Then also he should be certain or, reasonably so, of the possible results against corrosion that he can offer.

The principle of the wash primer assures definite promising results in the fight against corrosion. In many cases cost reduction, increased production, and greater corrosion protection prove the value of this new method of finishing preparation. The finisher may do well to consider this new scientific approach.—*Alex Abbot.*

Scientific Electric Appoints Pouilly as Manager

Scientific Electric has appointed Mr. Marcel Pouilly manager of the company's Ionic Spray Division. Pouilly will be stationed at Scientific Electric's Garfield, N. J., plant which manufactures induction and dielectric heaters, as well as micro pressure ionic high potential paint spray equipment.

Mr. Pouilly has had wide experience in the finishing industry and in the manufacture of spray equipment.

New Setup for Surface Conditioning Metal

A METAL CLEANING machine recently installed in the Buckley Mfg. Co., Cincinnati plant, provides a good example of a unit specifically planned for today's production needs and for anticipated future requirements.

Engineered and built by a well-known Cincinnati firm, the machine is designed for pre-finishing operations. It includes washing, phosphate coating and chromate acid rinse and drying stages, handled on a monorail conveyor.

Present production through the machine consists of air conditioner cabinets and parts with a maximum size of 36x18x18-in., and the tunnel opening is of corresponding size. When larger cabinets, up to 55x36-in. are to be cleaned in the future, the tunnel opening can be increased to that size. All other requirements for the larger production are already in place—spray and drying nozzles, extra tank and pump capacity, etc.

The machine itself is 91-in. in overall length, being arranged in a U shape to give a compact unit 47-ft. long. It is 14½-ft. high and only 14-ft. wide. The stages are listed as follows:

Approach, 6-ft.; hot wash, 5-ft.; drain, 8-ft.; hot phosphate treatment, 5-ft.; drain, 7-ft.; cold rinse, 2½-ft.; drain, 8-ft.; chromic acid rinse, 2½-ft.; drain, 6-ft. Following these operations, the parts emerge, travel 12-ft. and then enter a 20-ft. hot air drying section.

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Distinctive Finishing Rooms!

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NEWARK, N. J.

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DETROIT "TAC" RAGS are an absolute necessity for cleaning any metal, wood or plastic surface before painting. Removes all dust, lint and sanding particles. Order today through your supplier.
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You get uniform, accurate masking every time with Brady Pre-Cut Masks. Use for spraying, sand blasting, stenciling. Made to meet your requirements. Come on handy Blue Streak Dispenser Cards or folded liner for fastest peel-and-apply time. Hundreds of shapes and sizes in stock. Specials made to order. Free usable samples and literature. Write:

W. H. BRADY CO.
Manufacturers of Self-Sticking Industrial Products
762 W. Glendale Ave., Milwaukee 12, Wis.
EST. 1914

The solution tanks on the machine are of ample capacity for the large pumps used. Heated by submerged, gas-fired tubes, each tank has a recirculating system which effectively removes entrained contaminants and keeps the solution usable for a longer period of time.

To effect maximum economy in operation, waste heat from the tank heating units is used for drying the parts in the hot air blow-off section.

The monorail through the machine operates at approximately 5-ft. per minute, giving a production capacity of 300 to 600 cabinets and parts per hour.—*The S. C. Baer Co.*

Enthone News Item Corrected

Referring to the news about our Chicago distributor, Ardco, Inc., published on page 124 of Jan. 1955 issue, by error we had indicated that Ardco, Inc. would be servicing Southern Illinois and Eastern Michigan. This should have read, "servicing Southern Illinois and Eastern Missouri."

Joins Ind. Sales of Nubian Divn. of Glidden Co.

L. F. Long, Jr., has been appointed as an industrial sales representative of the Nubian Industrial Division of the Glidden Co. Mr. Long is responsible for industrial paint sales in the "middle South." His previous positions with Glidden included assignments as technical service director of the Central Industrial Division and as national project development coordinator at Glidden's national headquarters in Cleveland.

L. F. Long, Jr.

Mr. Long, who graduated from Case Institute of Technology with a degree in Chemical Engineering, will live in Nashville, Tenn.

HERE'S A DOWN-DRAFT PAINT SPRAY BOOTH THAT COSTS LESS—WORKS BETTER

Photo Courtesy of St. Paul Structural Steel Co.

With R P Paint Arrestors, of course!

This structural steel company had difficulty controlling paint overspray in a conventional booth. R P Paint Arrestors installed below the floor grills simply, economically provided the solution—with a minimum disruption of regular production. Your plant can benefit, too, with the R P way to paint spray booth efficiency, economy, convenience.

RP . . . PRODUCTS OF RESEARCH

Research Products Corporation
Dept. 34, Madison 10, Wis.

New Plastics Fair Invites Toy Makers to L.A., April 6-10

Toymakers from all over the world have been invited to show their best designs in plastic toys, hobbycraft and sport equipment in an educational exhibit at the World Plastics Fair and Trade Exposition to be held in Los Angeles, California, April 6-10, 1955. For further information, write to Philip M. Kent, Managing Director of the Fair, 8762 Holloway Dr., Los Angeles, Calif.

Carborundum Co. Takes Over Curtis Machine Corp.

The Carborundum Co., Niagara Falls, N. Y., has acquired the Curtis Machine Corp., according to a joint announcement by General Clinton F. Robinson, president of Carborundum and Mr. Gene DeMambro, president of Lincoln Park Industries, Inc., of which Curtis Machine was a wholly owned subsidiary.

Mr. DeMambro, president and general manager of Curtis Machine since 1946, will continue in that capacity, reporting to Mr. Wm. H. Wendel, vice president in charge of Carborundum's Coated Abrasives Division in Wheatfield, N. Y.

Curtis Machine Corporation, operating in Jamestown, N. Y., since 1913, pioneered in the manufacture of belt sanders and rubbing machinery for industry.

Standard-Toch Chemicals, Inc. Appoints F. C. Wehrman

F. C. Wehrman has been appointed Eastern New England technical sales representative for Standard-Toch Chemicals, Inc., Staten Island, N. Y., and Chicago, Ill., manufacturer of organic finishes for industry since 1848. He will service the Eastern Massachusetts, Rhode Island, New Hampshire and Maine industrial manufacturing areas.

Well-known in the finishing industry, "Fred" Wehrman was formerly on the editorial staff of a national trade publication devoted to industrial coatings, in which capacity he served as engineering editor for 3½ years.

Fred Wehrman's address is 65 Washington St., Natick, Mass. Phone: Olympic 3-1638.

New Small Parts Washer Is Radiant Gas Heated

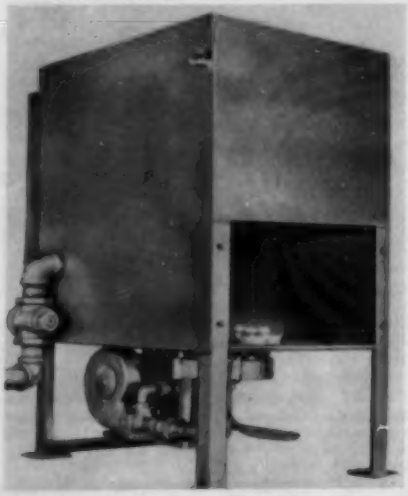
A compact small parts washer, suited for use with commercial cleaning compounds, has been developed by the Burdett Mfg. Co., 3425 W. Madison St., Chicago 24, Ill.

This new unit is fired by the Burdett gas-fired "Radiant Heat" System, which has revolutionized many heating processes during the past decade. It is available in three sizes; tank capacity, about 50 gallons. It is complete with an inclined trough for scum removal and an overflow drain outlet.

Safety is important; it has safety control and automatic gas valve to supervise pilot operation and main gas supply.

Speed and economy of operation are based on the efficiency of its "Radiant Heat" and the design of heating chamber insulation.

For more data, circle 1 on colored card.



Safety features; radiant heat; three sizes.

Klem's Improved Phosphate Coating Material

Klem Chemicals, Inc., 14401 Lanson Ave., Dearborn, Michigan, announces a new addition to its line of phosphatizing materials. This new product, called Klem Kote No. 1105, contains improved accelerators which give exceptionally good cleaning to the metal, especially where carbon smut is a problem.

Klem Kote No. 1105 is a moist white powder for use on both ferrous and non-ferrous metals. It produces a tight iron-manganese type coating. Can be used in either spray type or immersion cleaning equipment.

Because of its high cleaning properties, Klem Kote No. 1105 is extremely efficient in a 3-stage spray operation.

For more data, circle 2 on colored card.

Polyethylene Bottles and Jars

Polyethylene bottles and storage jars, featuring heavy-wall, all-welded construction, and designed for handling acids and other corrosive liquids, are now available from the American Agile Corp., P. O. Box 168, Bedford, Ohio.

For more data, circle 3 on colored card.

Al.-Pig. Strippable Coating

Production of an aluminum-pigmented strippable coating is announced by Specialty Coatings, Inc., division of Thompson and Co., industrial and technical coating specialists, Oakmont (Pittsburgh district), Pa.

Providing a fast, economical method of protecting metal surfaces during interim periods, the coating is designated as PV-845, and may be applied by either brush or spray. It may be used advantageously on all types of metals during both inside and short-term outside storage; on polished surfaces to prevent marring and scratching; for coating idle tools, dies, etc.; to protect against die marks in stamping operations; as a removable film on inner surfaces of spray booths; as a web coating to enclose bulky objects.

It requires no surface preparation and can be stripped off easily without leaving a greasy residue. The aluminum pigment inherent in the coating helps to provide maximum surface toughness and assists in forestalling moisture transmission.

For more data, circle 4 on card.

Wood Cabinet Lacquer

Barrett's Cabinet Lacquer is a 27% solids, cold spray, wood finish. It has been tested for cold check resistance on 3-ply walnut veneer and on 3-ply mahogany veneer at 15 cycles without observable failure. The finish rubs and polishes nicely after an overnight dry. Tests show that the film has excellent alcohol resistance.

It is recommended for use on cab-

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Expert technical assistance provided in solving your finishing problems. Prompt delivery guaranteed. Phone, write or wire:

Phoenixville, Pa.

Tampa 6, Florida

inets and other wooden objects where an economical, full tough coating is desired. This lacquer has been in production for some time and has been well received by the trade.

Sheen: 25, 50, 75, and full gloss, or made to customers' specifications. Color: Pale straw. Viscosity: 32 to 35 seconds, No. 4 Ford cup at 70° F.

A product of Barrett Varnish Co., 1532 S. 50th Court, Cicero 50, Illinois.

For more data, circle 5 on colored card.

Anti-Rust Spray Has Silicones

Gard Anti-Rust Spray, packaged in Gard's handy push-button container, is a new rust proofer containing silicones and polar compounds. It is specially formulated to prevent rust and corrosioon in outdoor storage for a year and, in indoor storage, for five years. A simple press of the lever releases a non-creeping, self-healing film that displaces water and neutralizes fingerprints.

This Anti-Rust Spray is compatible with all lubricating oils and greases, and can be polished to provide an almost invisible protective film, or it can be left intact as sprayed—giving a slightly more durable and visible protective film. It can be applied directly to wet metal; it will completely displace all water present.

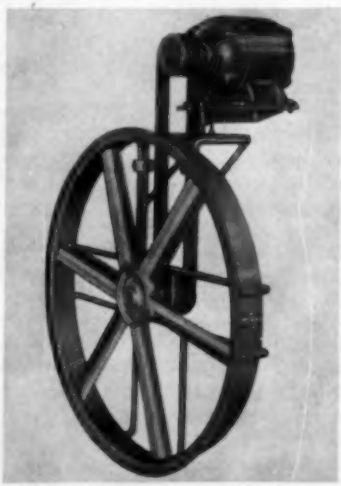
A product of Gard Industries, Inc., 733 Green Bay Road, Wilmette, Ill.

For more data, circle 6 on colored card.

Non-Spark Exhaust Fans

M & E Mfg. Co., 2571 Winthrop Ave., Indianapolis, Ind., announces the development of the Series "R" belt-driven exhaust fan as a new addition to its regular line of exhaust fans.

The new fan unit is offered in a complete range of sizes 12-in. through 48-in. diameter, with capacities from



In sizes 12-in. through 48-in., with or without motor; solid cast aluminum blade.

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A service to aid industry in producing longer-lasting and better-looking products. Quick predetermination of durability and permanency by actual exposure test in South Florida. Write us today for full information.

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If you require your coatings to accomplish some specific task — something beyond mere ornamental appearance or average longevity . . .
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• **THE VARNISH PRODUCTS COMPANY**

5206 Harvard Avenue, Cleveland, Ohio

900 to 38,000-cfm., suitable for operation against static pressures up to 1½-in. Design features include non-sparking, non-corrosive solid-cast aluminum blade, sealed-for-life ball bearings, adjustable motor mount support and heavy duty construction.

These new fans are easy to install, offer low maintenance cost and are designed to accommodate any standard stock motor of proper rating. They are available with or without motor from the factory.

For more data, circle 7 on colored card.

Corrosion Resistant Coating

"Neoprene W" is a new one component neoprene synthetic coating which is easily applied by brush or spray. Curing takes place at room temperature. It is recommended for maximum maintenance protection against most acid and alkali fumes and splash and high humidity. It shows excellent resistance to abrasion and weathering. No catalysts or accelerators are required.

Additional information may be had from Carboline Co., 331 Thornton St., St. Louis 19, Mo.

For more data, circle 8 on colored card.

Heats What's in Tank Quickly

Rempe Co., 340 N. Sacramento Boulevard, Chicago 12, Ill., offers a new line of heaters called Hi-Therm grid heaters for efficient heating of solutions in rinse tanks, cleaning tanks, caustic tanks, etc.

These heaters feature a maximum amount of prime heat transfer in a limited space. Full details may be had by writing the manufacturer.

For more data, circle 9 on colored card.

USE
Electro-Cold STRIPPER

Strips in Seconds

NONINFLAMMABLE
NONINJURIOUS

Removes hard baked-on enamels, primers, wrinkles, hammers, synthetics, japans, and 3M Scotchlite in seconds in most cases, and minutes in others. *The finish literally pops off!* There's no delay in getting metal items back in production when ELECTRO COLD STRIPPER is used.

It is safe, non-inflammable and requires no heat. Used by leading industrial concerns and Government agencies. TRY IT!

Write for samples—or order 5 gallons at drum price.

ALLIED FINISHING SPECIALTIES CO.
2441 W. GRAND AVENUE • CHICAGO 12, ILLINOIS

IDEAL TACK RAGS
FOR A PERFECT FINISH
Bulk or Bagged
IDEAL CHEMICAL COMPANY
1499 Dean Drive, South Euclid 21, Ohio

"Triolite" Multicolor Finish

"Triolite" is a texture finish which allows the application of from one to five colors through the spray gun at one time. Color combinations are unlimited. "Triolite", due to its patented qualities, U.S. Patent No. 2,591,904, can be the means of reducing some of the surface preparation on wood, metal or composition. The multi-color textured finish will cover most blemishes or faults of the surface being coated.

The new finish is durable and highly resistant to abrasion, chipping and cracking. "Triolite" is basically a lacquer composition and air dries in about 30 minutes; under normal conditions it can be handled in two or three hours. It comes ready to use in both solid colors or mixed. For further information about this finish, write or call Denny, Hilborn & Rosenbach, Inc., 234 N. 12th St., Philadelphia 7, Penna.

For more data, circle 10 on colored card.

Non-Toxic Aerosol Enamels For Nursery Use

Babies who like to gnaw on their nursery furniture or toys may do so safely if the objects are spray painted with a new aerosol enamel that contains no lead pigment or lead drier.

The product, Kiddie-Spray is nontoxic and available in white, blue,

pink, yellow and green. Packaging in a push button spray container not only makes the job of repainting or touch-up easier and less messy, but enables more close duplication of the smooth original finish.

DuPont "Freon" fluorinated hydrocarbon propellant, a liquified gas that is nonflammable, non-explosive, virtually odorless and non-toxic provides the dispensing pressure in the aerosol products.

The enamels are a product of Sheffield Bronze Paint Corp., 17814 Waterloo Rd., Cleveland 19, Ohio.

E. I. DuPont de Nemours & Co., Wilmington, Delaware, furnishes the freon gas.

For more data, circle 11 on colored card.

Portable Infrared Drying Units

A new line of portable infrared heating and drying units are designed for heating and drying purposes in the automotive, electrical and manufacturing fields.

Available in five, six and 13-lamp units, they are adjustable in height from 18-in. to 6-ft. They are mounted on four free moving casters for easy maneuverability, making them especially convenient where space requirements are limited. The units can be tilted to any angle or swung in a vertical or horizontal position for concentrated heating or drying.

For complete informatiin, write North American Electric Lamp Co., 1014 Tyler St., St. Louis 6, Mo.

For more data, circle 12 on colored card.

AGATEEN

CLEAR COATINGS

Are the standard of Superior Quality!

There is an AGATEEN Clear Coating to meet your specific requirements.

No samples.
Small trial orders accepted.

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MASTER PAINTERS' STRIPING TOOL
Easy to Use as a Fountain Pen

Men in every branch of industry now rely on Master Painters' Paint Striping Tools to aid in turning out cleaner work in a fraction of the time and with a fraction of the effort.

This amazing tool paints straight or curved lines with equal facility. No smears or smudges. Uses any kind of paint, enamel or lacquer. Newest model paints DOUBLE parallel lines . . . wide or narrow or both —*with one operation*. Does a big job in large or small shops.

Write for PICTURE FOLDER with prices and descriptions — all sent FREE.

USE FOR STRIPING
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—anything and everything that requires clean, accurate striping with paint, enamel or lacquer.

FREE ENGINEERING SERVICE
If you have any paint striping problem, our staff of experts will be glad to cooperate with you. No cost or obligation.

WENDELL MFG. CO. 4234 N. LINCOLN AVENUE Dept. 92 CHICAGO 18, ILL.

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PRODUCT DEVELOPMENTS BY CM CONFORMING MATRIX

MASK WASHING MACHINES
50% faster than any other make. Cut solvent consumption. Avert production delays due to damaging of masks by hand scrubbing.

SPRAY PAINTING MASKS
A competent engineering staff will counsel with you on the most efficient technique for handling your particular requirements.

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Increase production hundreds to one over hand methods. Reduce labor costs. Eliminate need of experienced workmen.

CLAMPS AND FIXTURES
Positive pressure and exact registration of the part in the mask. Reduce rejects. Free both hands for productive movements.

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GRAINING PLATES

• Widely used by leading manufacturers for reproduction of wood grains on wood, metal, hard-board and plastic surfaces.

AMERICAN RICHWOOD PRODUCTS CO.

Graining Plate Division

104 E. Mason St. Milwaukee 2, Wis.

Paint Mask Provides Protection Against Pigment Overspray

The new "Flex-A-Prene" Paint Mask, reecntly developed by Flexo Products, Inc., 1468 W. 9th St., Cleveland 13, Ohio, provides protection for spray paint operators. It keeps out paint pigments and solvents and is comfortable to wear, as well as being easy to talk and breathe through.

The "Flex-A-Prene" Paint Mask weighs *only one ounce* and can be worn with goggles or spectacles.

"Prenex" the new filter material, is not affected by paint pigments or solvents and won't clog, soften, swell or jell, even after hundreds of hours of exposure. This filter lasts much longer than conventional paint mask filters and cuts down on costly lost production hours because less frequent filter replacements are required.

For more data, circle 13 on colored card.

New Rustproofing Treatment

A chemical rustproofing treatment for ferrous metals was one of 129 new "Merit Award" developments selected by a panel of nine judges from among hundreds of products brought to market within the past two years by Bay State manufacturers competing for top honors . . . .

This "Merit Award" went to Rust-Proofing & Metal Finishing Corp., Commercial Ave., and Binney St., Cambridge 42, Mass., for its Endurion super-rustproofing treatment, which provides a final finish in black, gray, olive-drab and other colors or a base for organic finishes. The official citation describes it as "a single-dip,

RONCI SPEEDIP WHIRL ENAMELER

Made in Three Sizes, R-100, R-200 and R-300 Capacities 312-cu.in. to 4400-cu.in.

IDEAL FOR LACQUERING AND ENAMELING PARTS UP TO 20 INCHES IN LENGTH

CUTS COSTS, SAVES UP TO 80% OF MATERIAL

Carries up to hundreds of lbs. per load, and up to 30 loads per hour can be coated with lacquer or enamel in these machines.

All operations are within the machine. Dipping tank is raised, submerging the parts in the basket, and then lowered and the parts whirled, throwing off excess material. No additional outside tanks required; no cleaning necessary when changing colors; no loss of material.

Prompt Deliveries

Write for further information and submit samples to be coated.

RONCI MACHINE COMPANY

A Division of F. Ronci Co., Inc.

2 ATLANTIC BOULEVARD CENTREDALE 11, R. I.

chemical immersion process, which reacts on a phosphated ferrous metal surface to form a complex compound, integral with the metal, which is more dense and far more corrosion-resistant than the base phosphate. Provides over 1200% greater resistance to corrosion than standard phosphating processes."

For more data, circle 14 on colored card.

PEARL ESSENCE

"Astralucine Brand"
Produces a high luster
on a variety of finishes

Write for your free copy of our informative Technical Bulletin.

"Pearl Essence Finishes"
—what they are and how to use them.

Argenta Products Co.
EASTPORT, MAINE

"Confetti" Enamel Produces New Multi-Colored Effect

Central Paint & Varnish Works, Inc., 59-69 Prospect St., Brooklyn 1, N. Y., has developed a revolutionary new multi-color interior spray enamel. The miracle of the product is that only one material goes into the spray gun and two or more colors come out. Only normal spray equipment and techniques are employed. The colors do not merge on spraying and the combinations and possible effects are highly decorative.

Excellent hiding power, durability and scrubability. If thinning is required only water is needed. "Confetti" is recommended by the company for use over wood, plastics, plaster, metal, paper, wallboard, gypsum, masonite, fiberboard, beaver board, composition board or presdwood.

For more data, circle 15 on colored card.

BOOKS On Finishing Available

"MODERN ORGANIC FINISHES—Their Application to Industrial Products" (452 pages) new	$8.50
"ORGANIC COATING TECHNOLOGY," Vol. 1	10.00
"FLOW COATING," (296 pages) new	6.50
"CHEMICAL FORMULARY" (Vol. IX) (Preceding Volumes also available, same price)	7.50
"FINISHING METAL PRODUCTS"—2nd edition (352 pages)	6.00
"PRACTICAL FURNITURE FINISHING" (112 pages)	1.75
"FURNITURE FINISHING (543 pages)	5.00
"SPRAY PAINTING"—Industrial and Commercial (169 pages)	2.50
"COLOR DECORATION AND DESIGN" (200 pages)	3.00
"THE MIXING OF COLORS AND PAINTS" (292 pages)	3.00
"WOOD FINISHING" (361 pages)	3.00
"NATIONAL PAINT DICTIONARY" (704 pages)	7.50
"MODERN POLISHES AND SPECIALTIES" (311 pages)	7.50
"GRAINING"—Ancient and modern (224 pages)	5.00
"THE SILK SCREEN PRINTING PROCESS" (225 pages)	5.00
"SCREEN PROCESS METHODS OF REPRODUCTION" (252 pages)	4.00
"THE SCIENCE OF WRINKLE FINISHING" (204 pages)	5.00
"THE SCIENCE OF MODERN WOOD FINISHING" (306 pages)	7.50
"PAINT & VARNISH TECHNOLOGY" (509 pages)	8.00
"METALLIC AND NON-METALLIC COATINGS FOR GRAY IRON" (76 pages)	1.75
"PAINT FILM DEFECTS — Their Causes and Cure" (544 pages)	12.00
"INDUSTRIAL SOLVENTS" (764 pages)	12.00
"FINISHING MATERIALS AND METHODS" (320 pages)	4.00

Cash Must Accompany Order—
Send for Descriptive Circular

INDUSTRIAL FINISHING
1142 N. Meridian St. Indianapolis 4, Ind.

Alkaline Powder Removes Rust, Scale, Paint

"Kelite Process 235" is a dry powder which, in water solution, removes hard winter scale, rust, and paint from ferrous metals. At a concentration of 3-lbs. per gallon of water at temperatures of 180°-212° F., it assures virtually complete removal of rust in 30 to 40 minutes.

No electrolytic current is used and the material is non-acid. In fact the pH is exceptionally high, yet it is safe to use on all ferrous metals, and the rate of attack on copper is low. *It cannot be used on lead, zinc or aluminum.*

Complete data is available from Kelite Products, Inc., 1250 N. Main St., Los Angeles 12, Calif.

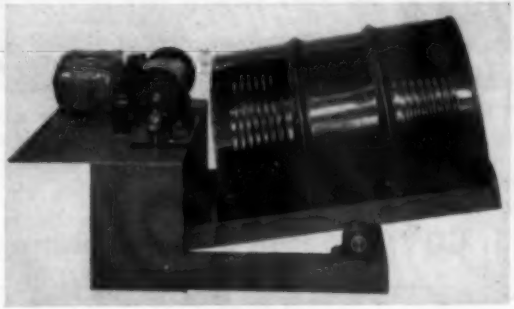
For more data, circle 16 on colored card.

Electric Power Sander

A heavy duty electric power sander has just been introduced by Wen Products, Inc., 5808 Northwest Highway, Chicago 31, Ill. The electric power sander Model 404 has been designed to meet all professional requirements.

Work on the Model 404 has been going on for over a year, during which time Wen Products sold thousands of its smaller Models 202 and 303 Sander-Polishers to satisfied users everywhere. Every bit of experience gath-

Electric sander with accessories in kit.



CHANGE DRUM ROCKER

Here is an entirely new type of agitator for mixing and agitating the contents of a partially loaded drum.

The drum rests in a welded angle iron frame, balanced on a shaft to give free rocking motion. Power is applied to one end of the rocking frame from a motor driven crank shaft, turning at about 30 R. P. M. At this speed, contents of drum are thrown violently from end to end to give maximum agitation. The change drum feature avoids cleaning delays, fire hazards of open containers, as well as danger of product contamination. Placing drum with bung up, makes sampling of contents easy. In making inquiry about this change drum rocker, please give capacity and gross weight of loaded container; voltage, phase and cycle of electric current; whether explosion proof motors are required.

THE VOL-U-METER CO., P. O. Box 54, Buffalo 16, N. Y.

ered in their production has been channelled into the Model 404.

The straight line action of the 404 sands with the grain, reaching all of the way into corners. Its operation is both quiet and cool, and its comfortable grip is streamlined to fit the hand.

The Model 404 is fully guaranteed, and comes in a complete kit which includes 15 sheets of assorted production paper, two polishing cloths, and a heavy steel carrying case with snap lock and handle. The motor is 110-120-V., 2-amps., 60-cycles, AC only.

For more data, circle 17 on colored card.

Tack Rag Wipes Surfaces Clean for Finishing

For final cleaning before finishing, simply wipe any metal, wood or plastic surface gently with a tack rag. Every speck of dust, lint, fine sanding and grinding dust is attracted like magic. The surface is clean and spotless, ready for paint or enamel.

The "Klix" tack rag consists of a durable gauze mesh, impregnated with a special blend of chemicals that never dries out. The rag remains soft, pliable and tacky indefinitely.

To guarantee high standards, each Klix tack rag is individually protected in a dust-proof glassine bag. For a free sample write to Klix "Tack Rag", Grenco Mfg. Co., 47 McClellan Terrace, West Orange, N. J.

For more data, circle 18 on colored card.

Let us Reclaim Your

TEST PANELS

Your Panels returned Pre-sanded and ready for use.

THE MAKIT COMPANY

Box 146 Sta. B. Toledo, Ohio

PROTECT LUNGS *against*
PAINT SPRAY – DUST – FUMES

DUPOR No. 4 RESPIRATOR has big double filters for easy breathing and greatest filtration! Soft rubber face mask gives airtight fit. Patented DUPOR valves bring in clean air—throw off breathed air! Weight 4 oz. Economical! Costs only $2.00 postpaid. Order Now!

H. S. COVER, South Bend, Indiana

CLEANEX
FINISHING OVENS
THE LABLY COMPANY • 700 PROSPECT AVE.
CLEVELAND, OHIO

Write for Information & Literature.

Alvey-Ferguson Takes Over The Cincinnati Automatic Conveyor

The Alvey-Ferguson Co., 717 Disney St., Cincinnati 9, Ohio, has acquired The Cincinnati Automatic Conveyor Co. and the manufacture of its "Trol-e-veyor" light-weight, easily-installed overhead conveyors. James A. Gailey, inventor of the "Trol - e - veyor" conveyor and former owner of The Cincinnati Automatic Conveyor Co., has joined the Alvey - Ferguson Sales and Engineering Staff.

Mr. Gailey, a resident of Cincinnati and a graduate of the University of Cincinnati in mechanical engineering, had had wide experience in both sales and product engineering before he developed the "Trol-e-veyor" system.

Brush-Scrubs Sheet Metal

A new industrial scrubbing machine that cleans both sides of metal sheets from all traces of surface dirt and oils has been developed by the Fuller Brush Co. Machine Division, Hartford 2, Conn.

The sheet scrubbing machine cleans

This is the short version of the two metal sheet scrubber models designed by Fuller Brush Co. Machine Division engineers to clean metal plates.

THINNERS

LOW COST!

- ASK FOR QUOTATIONS
- FORMULATED TO MEET ANY SPECIFICATION
- QUALITY AND UNIFORMITY GUARANTEED

Specialists in Thinners for

- Leather
- Metal Etching
- Polystyrene Plastics

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Synthetic Reducers and Retarders

Write or phone for technical information. Prompt service and deliveries.

ELL-BEE CHEMICAL COMPANY, INC.

Hanover, N. J. Phone WHippany 8-0194
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WATER WHITE LACQUERS & SEALERS HIGH SOLIDS AND NON-YELLOWING

for: — **MODERN FURNITURE**

and all light shades

- LOW COST
- COLD SPRAY
- VARIOUS SHEENS
- EXCELLENT BUILD
- MAR RESISTANT

plates to the high degree necessary to pass successfully the water break test for cleanliness. That is, a film of water spread on the surface will be continuous when the plate is clean. The water film breaks where any surface oil remains.

There are two models, a long and a short. Either machine processes sheets at the rate of 60 feet a minute. A detergent and water solution is pumped onto the plates when they enter the machine. They are then scrubbed with nylon cylindrical brushes, and rinsed and dried as they come out.

For more data, circle 19 on colored card.

Beach Oil, Moisture Separator Has Clear Cylinder

A clear plastic cylinder has been added to the line of compressed air Sta-Dri Oil & Moisture Separators manufactured by Beach Precision Parts Co., 120 Mechanic St., Boonton, N. J. The new clear view unit, Model 65 C, is 2½-in. dia. by 12-in. long.

The plastic cylinder walls are thick and tested to withstand high pressures. Purpose of the transparent cylinder is to show when the filter elements should be replaced, or when moisture should be drained from the bottom of the separator.

For more data, circle 20 on colored card.

New Chemical Specialties Plants

The Pennsylvania Salt Mfg. Co. announces the opening of a new plant at Delaware, Ohio. This plant, Pennsalt's 13th production facility, is a component of the Company's Chemical Specialties Division. A similar installation nearing completion at Chicago Heights, Illinois, will be dedicated February 10.

Included among the products produced in the new Pennsalt plants are cleaners, metal processing chemicals and corrosion resistant coatings.

REPRINTS AVAILABLE

"Industrial Paint Samples 'Big Deal'," price 10 cents per copy.

"Force Drying Wood Finishes", price 10 cents per copy.

"Cleaning and Conditioning Metal Surfaces for Coatings", price 20 cents per copy.

"A Half Decade of Finishing Progress," price 10 cents per copy.

"Tumble Finishing," price 10 cents per copy.

"Flow Coating as a Means of Paint Application," price 10 cents per copy.

"Stirring and Straining," price 10 cents per copy.

"A Method Engineer Analyzes Paint Selling," price 10 cents per copy.

"Preparing and Painting Metal Specialties", price 10 cents per copy.

"Flock (What it is, its appearance, its uses both for utility and decoration)", price 10 cents per copy.

"Filler, The Theory and Technique of Application", price 10 cents per copy.

"Finishing System for Magnesium", price 10 cents per copy.

"Rapid Electrostatic Finishing", price 10 cents per copy.

INDUSTRIAL FINISHING Magazine

1142 N. Meridian, Indianapolis 4, Ind.

New Barrel Type Degreasers

Armstrong & White, of Cheswick, Penna., is now manufacturing a new line of barrel-type vapor degreasers. Introduced as the Aircon basic barrel vapor degreasers, they are of two types: The Aircon straight vapor degreaser and the Aircon heavy duty

Basic barrel vapor degreaser.

spray degreaser. These compact, portable units, constructed of standard 55-gallon barrels, effectively remove oil and grease from all metals, plastics, glass and other nonporous parts.

In the Straight Vapor unit, parts suspended in the barrel are subjected to vapors of boiling trichlorethylene nonflammable solvents. In a few seconds, these parts are uniformly cleaned. The parts are delivered warm and dry, ready for succeeding fabrication, assembly, painting, plating or other finishing.

Some types of oil and grease are more difficult to remove than others and require more than the straight vapor method of cleaning. This problem is solved by the Aircon heavy duty vapor spray degreaser, which

Rejects dropped from 3% to .001%

because of

Better Cleaning

with an

Industrial Washing Machine

The reject rate of this component metal parts manufacturer dropped dramatically when an Industrial Washing Machine was put into use—all due to better cleaning by high-pressure sprays.

One of our 38 different basic designs can probably be used to meet your needs —if not, our engineers can design a machine that will do the job you want.

Get the full story now! Write Dept. I-2.

ISC INDUSTRIAL Systems COMPANY

Exclusive Sales Agents For
Industrial Washing Machine Corp.
Matawan, New Jersey

includes a spray outfit. By spraying the parts with warm filtered solvent and then rinsing them in the solvent vapors, the difficult greases are easily removed.

For more data, circle 21 on colored card.

Float Valve Controls Level of Liquids

A new float type valve for controlling levels of liquids in many industrial operations has been added to the line of industrial control devices manufactured by Fulton Sylphon Division of Robertshaw-Fulton Controls Co., Box 400, Nashville, Tenn.

The direct acting control is sturdily constructed, mainly of bronze and steel. Floats of other metals for special applications and in 11 different sizes are available.

For more data, circle 22 on colored card.

PAINT TESTING LABORATORY

Any test to F. S. TT-P-141b

PENNIMAN & BROWNE, INC.

Chemists-Engineers-Inspectors

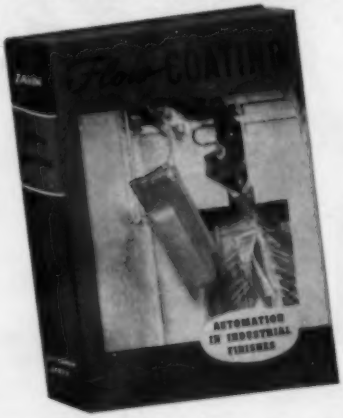
341 St. Paul Place-Baltimore 2, Md.

Carborundum Establishes A New Division

The Carborundum Co. has established a new operating unit, the Electro Minerals Division, to manufacture and sell silicon carbide, fused alumina crudes, abrasive grain and related products in the United States. Mr. Joseph S. Imirie, formerly assistant to the president, will be general manager of the new division.

The large Bonded Products and Grain Division in Niagara Falls will be designated The Bonded Abrasives Division and will specialize in the manufacture and sale of grinding wheels, sharpening stones and other bonded abrasives.

FLOW COATING BOOK



Mr. Zahn the author of "Flow Coating", says that any product which can be dipped or sprayed can be finished by the flow-coat method. His new book contains 296 pages 5¼x7¾-in.; 13 chapters.

The great range in new kinds of solvents now available, plus phenolic-base resin paints and vinyl type paints which have been so successful in the flow-coating method of application, presents endless possibilities for profit. The industrial user can now afford to pay a little more for better materials and profit by a higher quality product

"Flow Coating" explains the various industrial painting methods such as: dipping, spraying, electrostatic, steam, roller coating, centrifugal, hand spraying, automatic dip and many others. Direct comparisons between flow coating and these methods are dealt with in detail.

Mr. E. A. Zahn has spent 25 years in research on industrial paints and application methods. He is the inventor of the Zahn Viscosity Cup, and has acted as consultant to many manufacturing concerns. In 1938 he received the Charles A. Coffin award for contributions made to the electrical industry. Mr. Zahn has been associated with General Electric for 25 years and is at present Organic Finishing Engineer at General Electric's Appliance Park, Louisville, Ky.

Price $6.50—Money Back Guarantee

INDUSTRIAL FINISHING

1142 N. Meridian St. Indianapolis 4, Ind.

New Dry Chemical Fire Ex.

A new streamlined fire extinguisher, styled by Raymond Loewy Associates, is rugged, effective and easy-to-use. It is being introduced by Ansul Chemical Co., Marinette, Wisc.

Puts out liquid and electrical fires.

Designed primarily for industrial use, the new unit is capable of expelling 10-lbs. of dry chemical—which is generally regarded as being the latest and most effective extinguishing agent against fires in flammable liquids, gases, chemicals, and electrical equipment. Its light overall weight of 22-lbs., and its simplicity of operation by inexperienced personnel, make it also suitable for use against fires in the home.

For more data, circle 23 on colored card.

Harry Fels With Yarnall Paint Technical Sales

Harry Fels has been appointed to the technical sales organization of Yarnall Paint Co., Philadelphia, Penna.

Mr. Fels is well known in the industrial coatings industry. He was formerly associated in a sales capacity with two other nationally known manufacturers, and has a thorough knowledge of organic coatings and modern finishing methods.

For Dust Free Finishes!
BOND TACK CLOTH

IN ROLLS
Cut off any size piece to use as needed.

IN BULK
Cut and folded. Ready to use.

STAYS SOFT AND TACKY
A SPECK-FREE FINISH EVERYTIME

Now Available in Rolls or Cut Bulk—White or Gold. In Three Different Types of Cloth

Get your Tack Cloth packed just the way it's easiest for you to use . . . either in 150 yard rolls of 36" wide cloth or in handy cartons . . . 100 or more Tack Cloths to the carton.

No matter which way you buy it, you can be sure that every square inch will stay SOFT and TACKY until the very last bit is used up!

The Cut Bulk size is 18" x 36" . . . folded to 4½" x 18" for ease of handling. ALL BOND TACK CLOTH is **Spontaneous Combustion Proof, Lint-Free and Wax Free.** Gives a sparkling speck-free Finish **every time.** Clean and sanitary. No waste.

TRY THEM and COMPARE RESULTS.
Samples Gladly Sent Upon Request.

BOND CHEMICAL PRODUCTS CO.
"The Tacky Wiper Specialists"
2641 N. CLYBOURN AVE. CHICAGO 14, ILLINOIS

Also Individually Packed in Glassine Envelopes—144 to the Carton

A Warranty of Satisfaction in Every Carton

Atlas Powder Offices Moved

Atlas Powder Co. has moved its general offices from the downtown Delaware Trust Building, where it has occupied space for 34 years, to a new building of its own on a 45-acre tract about three miles from downtown Wilmington.

The new building, under construction for 14 months, provides additional space as well as the most up-to-date facilities for the company's office staff.

DuPont Sales Meeting; Chicago

The annual meeting of the Chicago Finishes Sales Office of E. I. du Pont de Nemours & Co., was held at the LaSalle Hotel in Chicago January 17 and 18. The 130 sales personnel in attendance were welcomed by Mr. D. E. Goldich, Chicago Regional Sales Manager.

The opening session brought together the representatives of the three departments comprising the Finishes Division; that is, Industrial, Trade and Refinish Sales. Problems and opportunities common to all three fields were discussed. Later the joint meeting was adjourned to permit the three sales departments to meet separately. In these departmental meetings matters peculiar to the department's activities were presented.

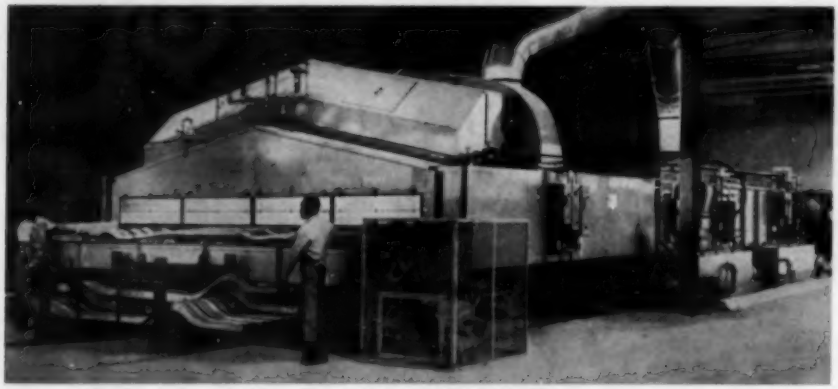
A joint session of the three departments on Tuesday afternoon brought the meeting to a close.

Teasdale Now V.P. of Gasway

R. R. Teasdale

E. W. Glaeser, president of Gasway Corporation, Chicago, Ill., manufacturer of metal-treating and roller-coating machinery, has announced the election of R. R. Teasdale as executive vice president of the ocmpany.

Since 1946, Mr. Teasdale has successively been Gasway's development director, chief engineer, industrial coating manager and recently general manager.



Heated by steam, this machine washes, rinses and dries 800 formed steel channels per hour.

Giant Machine at Budd Plant by Industrial Washing Mach. Corp.

A giant machine that washes steel chassis frames has been installed at the Red Lion Plant of the Budd Co., Philadelphia, manufacturer of railroad cars, automobile bodies, chassis and other metal products. Designed and constructed by the Industrial Washing Machine Corp., Matawan, N. J., the new machine is one of the largest the company has ever made.

Because of the size of the material to be processed, the machine itself had to be of massive proportions. It is 60-ft. long, 24-ft. wide and 13-ft. high. The conveyor width is 18-ft. across with a working height of 18-in. The top of the machine is roof-shaped to provide greater strength in supporting the top baffles and top spray systems. The work to be processed is put on four strands of conveyor chain which returns inside the machine.

Oakite Rustripper at Metal Shows in Los Angeles

Oakite Rustripper, the recently announced alkaline deruster, will be featured by Oakite Products, Inc., at the ASTE Western Industrial Exposition and the ASM Western Exposition in Los Angeles in March.

Designed primarily for the removal of rust and heat scale from parts where dimensional change and acid embrittlement must be avoided, this material requires only an alkaline soak and a rinse. There is no danger of over immersion. Once the rust is removed, all action stops. It can be applied in several ways, in hot or cold solutions, with or without cyanide, and with or without current.

The Oakite booths will also feature Cryscoat process of iron and zinc phosphate treatments, electrocleaning, barrel finishing, drawing compounds and materials for paint spray booth water treatment.

Oakite will have booth 880 at the ASTE Industrial Exposition and booth 680 at the ASM Metal Exposition.

Industrial Finishing Show in Cleveland June 20-23

Cleveland will be the site of the 1955 Industrial Finishing Exposition. The show is to be held in the huge Cleveland Public Auditorium on June 20 through 23 in conjunction with the 42nd Annual Convention of the American Electroplaters' Society.

It is estimated that about 12,000 finishing plant personnel will attend. A full round of activities has been planned, including trips to various finishing plants in the Cleveland area.

The convention affords opportunity for the exchange of information so essential to the continued progress of the industry. The degree of importance to the coming meeting by equipment manufacturers is obvious from a report to the effect that more space has been contracted for than any previous show.

For Your Convenience

Use INDUSTRIAL FINISHING magazine's "Reader Service" return cards to obtain further information on products described and illustrated in the "Materials; Supplies; Equipment" section which precedes this page; also, to receive manufacturers' literature — booklets, catalogs, circulars — as mentioned on the following pages.

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Industrial Finishing Magazine

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Manufacturers' Literature

Epon Resins in primers and surface coatings for home appliances and for many other applications, are explained in a new illustrated brochure entitled, "Planning to Paint a Pyramid?" offered free by Shell Chemical Corp., 380 Madison Ave., New York 17, N. Y. and 100 Bush St., San Francisco 4, Calif.

For more data, circle 24 on colored card.

Complete Finishing Systems. Mahon's Catalog A-655 describes and illustrates typical installations which include conveyorized metal cleaning, rust proofing, paint application (dip, flow coat or spray), drying and baking ovens—entire setups specially designed, built and installed for continuous, fast, economical production. The R. C. Mahon Co., Detroit 34, Mich., and Chicago 4, Illinois.

For more data, circle 25 on colored card.

Mar-Resistant Enamels for office furniture and numerous other products are explained in literature available from the Finishes Division of E. I. duPont deNemours & Co., Inc., Wilmington 98, Ala.

For more data, circle 26 on colored card.

White Lacquer that has excellent color retention (doesn't yellow with age) and which is available in gloss or flat, is explained in information available at the National Chemical & Plastics Co., 1422 Philpot St., Baltimore 31, Md.

For more data, circle 27 on colored card.

Hot Spray Heaters. Information on this subject—why it is so desirable, economical and easy to spray lacquers and synthetic enamels when they are heated—is available from The Spee-Flo Co., 720 Polk, Houston, Texas.

For more data, circle 28 on colored card.

Pre-Cut Masks, accurately and sharply cut from adhesive coated paper or fabric, are used to mask off areas of any size or shape when applying paint, or stenciling or sand blasting in production. They are made in hundreds of sizes and shapes and come in handy dispenser cards or folded liners for fast peel and apply operation.

For more data, circle 29 on colored card.

Drum Plug Wrench. For loosening or tightening plugs or bungs in steel drums. Is available in steel or non-sparking metal. Saves time and affords safety.

For more data, circle 30 on colored card.

Tack Cloths really wipe a surface clean of all dust specks, lint or dirt to condition it perfectly for a coat of finishing material or to make it clean for exhibiting, photographing or polishing. A tack rag holds the dust and dirt it picks up instead of brushing it back into the air.

For more data, circle 31 on colored card.

Industrial FINISHING

February, 1955, Issue

READER SERVICE DEPARTMENT

Without obligation, please see that we receive the manufacturers' literature identified by the number or numbers, circled on this card:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66

Signed.....*Title*.....

My company's name.....

Street Address.....

City.....*Zone*.....*State*.....

Fast Striping Easy. A picture folder that illustrates the use of an adjustable paint striping tool on a variety of straight and curved work in small and large shops, is offered by Wendell Mfg. Co., Dept. 92, 4234 Lincoln Ave., Chicago 18, Ill.

For more data, circle 32 on colored card.

Chlorinated Rubber. Technical information about new developments in lacquer-type coatings made from nitrocellulose, ethyl cellulose, cellulose acetate (also, chlorinated rubber) is offered by the Cellulose Products Dept. of Hercules Powder Co., 928 Market St., Wilmington, Dela.

For more data, circle 33 on colored card.

Spray Through Masks to produce sharply defined decoration in two or more colors. The formed masks, how to use them and new facilities for washing them—all of this and more is revealed in illustrated literature offered by Conforming Matrix Corp., 331 Toledo Factories Bldg., Toledo 2, Ohio.

For more data, circle 34 on colored card.

Mix and Pump Paint. A new Idea Book is offered free to explain the latest methods and facilities for mixing, straining and pumping paints and finishing materials . . . . from drums to production stations where such coatings are applied. The offer is made by Alemite, Dept. L-25, 1830 Diversey Parkway, Chicago 14, Ill.

For more data, circle 35 on colored card.

Wash-Primer. A new "one-package, one-operation" wash primer for spraying, brushing or dipping forms a weathertight "skin" that lasts, according to the manufacturer. A free bulletin tells more about this 40X-610 announced by Stanley Chemical Co., 41 Berlin St., East Berlin, Conn.

For more data, circle 36 on colored card.

Spray on; Peel off. A coating for the interiors of spray booths. When this coating becomes loaded with overspray, peel it off, dispose of it, and recoat the clean booth interior. A special test offer is announced by Better Finishes & Coatings, 268 Doremus Ave., Newark 5, N. J.

For more data, circle 37 on colored card.

Specialist and Lab. The services of both are offered users of finishing materials by Egyptian Lacquer Mfg. Co., Box 444, Newark 1, N. J.

For more data, circle 38 on colored card.

Automatic Spraying. What results full and semi-automatic spraying has produced in other plants and what it could do for your production—this and other spray information is revealed in literature offered free by The DeVilbiss Co., Toledo, Ohio, and Santa Clara, Calif.

For more data, circle 39 on colored card.

Satin Finish. A clear, elastic, rubbed-effect finish, for furniture and cabinets, that is unharmed by spilled water or liquor—one that has a "waxed feel"—is called Perfex Satin Finish. Samples and demonstration are offered by Perfection Paint & Color Co., Indianapolis 2, Ind.

For more data, circle 40 on colored card.

Thinners, standard and "tailor made" to mix with ordinary or special materials, are announced by Potter Paint Co., Inc., Cortland 1, N. Y. The company offers a free sample on condition that certain information is supplied.

For more data, circle 41 on colored card.

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OR
HAMMOND SOLVENTS RECOVERY SERVICE
241 Brunswick St., Hammond, Ind.

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DRUM PLUG WRENCH
Instantly loosens, tightens 95% all plugs or bungs in steel drums. Has 16" extra-strong steel tubing handle. Wgt. only 2 lbs.
Order 1 or more today!

THOUSANDS IN USE saving time, labor, accidents!
SATISFACTION GUARANTEED..... **$3.30**
Non-Sparking type.....$5.10
Plus Parcel Post
MORSE MFG. CO., Inc.
763 W. Manlius St., E. Syracuse, N. Y.

A New Respirator for workmen to wear as a protection when working in or near paint spray, dust or fumes has new features—big double filters for easy breathing, soft rubber face mask to give an airtight fit, and weighs only 4-oz.

For more data, circle 42 on colored card.

Clean Paint; Filters. For straining and cleaning paint before it is applied by dipping, spraying, flow coating or roller coating. Also filters for cleaning your compressed air lines. Engineered filteration is desirable in every product painting and finishing department.

For more data, circle 43 on colored card.

Cleaning Book Free. All surfaces must be really clean before being coated with any paint or finishing material, regardless of what method of paint application is used. To explain what cleaning materials and methods are available to industry, Klem Chemicals, Inc., 14401 Lanson Ave., Dearborn, Mich., offers a new catalog.

For more data, circle 44 on colored card.

Ross Engineering. An illustrated folder printed in two colors answers the question: "What Does Ross Engineering Do?" Ross industrial air systems (heating, drying, circulating, cleaning) are briefly explained and shown at work by examples in several industries. The company's New York City address is 444 Madison Ave.

For more data, circle 45 on colored card.

Metal Stripping. Enthone, Inc., 442 Elm St., New Haven, Conn., offers a new 4-page illustrated folder which describes Enthone "Enstrips," materials for selective stripping of one metal from another.

For more data, circle 46 on colored card.

Viscosity Control. A new Technical Bulletin, Form VA-20, on the Norcross Viscosity Control System for Painting and Finishing is offered by Norcross Corp., 247 Newtonville Ave., Newton 58, Mass.

For more data, circle 47 on colored card.

Cold Degreasing. Information on Chlorothene (Dow Inhibited 1,1,1-Trichloroethane), a new cold degreasing solvent manufactured by The Dow Chemical Co., is contained in a pamphlet offered free by the company's Solvent Sales department.

Chlorothene's low toxicity, high solvent power and stability recommend it for cold-cleaning and dip-cleaning.

For more data, circle 48 on colored card.

"Pearl Essence Finishes" is the name of an informative technical bulletin which tells what they are and how to use them. A free copy is offered by Argenta Products Co., Argenta, Maine.

For more data, circle 49 on colored card.

"Organic Solvents" is the name of a new revised handbook of 64 pages that tells about flash point, toxicity, drying time, solvent power, etc., of solvents used in cleaning operations and in thinners for various paints and lacquers. A copy is offered free by The Solvents & Chemicals Group, 2540 W. Flournoy St., Chicago 12, Ill., or at any one of the company's offices.

For more data, circle 50 on colored card.

Finishing Ovens. Descriptive and pictorial literature about ovens for drying and baking a variety of paint coatings can be obtained from The Lanly Co., 760 Prospect Ave., Cleveland, Ohio.

For more data, circle 51 on colored card.

Electro-Cold Stripper. Safe; non-inflammable; quickly removes baked-on enamels and synthetics. Write for information and sample . . . . to Allied Finishing Specialties Co., 2641 W. Grand Ave., Chicago 12, Ill.

For more data, circle 52 on colored card.

Dip-Whirl Coater. A machine for rapidly and completely coating a variety of small parts—metal, wood or plastic. Parts are placed in mesh basket, submerged in coating material, withdrawn, whirled to remove excess, then dumped on trays or conveyor to air dry or bake. A product of Ronci Machine Co., 2 Atlantic Blvd., Centredale 11, R. I.

For more data, circle 53 on colored card.

Oven Bulletin 4. Young Brothers Co., 1835 Columbus Road, Cleveland 13, Ohio, offers a free copy of its Bulletin 4, which describes and illustrates standard and custom built batch and conveyor ovens for baking, drying and curing paint coatings on a variety of products.

For more data, circle 54 on colored card.

"How to Strip Paint" is the title of an informative booklet offered free by Oakite Products, Inc., 32F Rector St., New York 6, N. Y. It answers many questions about effective enamel stripping procedures.

For more data, circle 55 on colored card.

Mixing in Drum. Equipment for rolling, rocking and tilting filled or partially filled drums of material, to thoroughly mix the contents, is described and illustrated in literature announced by The Vol-U-Meter Co., P. O. Box 54, Buffalo 16, New York.

For more data, circle 56 on colored card.

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Metal Stripping. Enthone, Inc., 442 Elm St., New Haven, Conn., announces that a new 4-page folder is available which describes Enthone Enstrips—materials for selective stripping of one metal from another. For example, nickel from steel or copper, tin or tin-lead from copper or steel, and copper from steel. A handy chart is given to enable easy selection of the proper stripper for any particular job.
For more data, circle 57 on colored card.

Automatic Viscosity Control. Technical Bulletin VA-20 published by Norcross Corp., 247 Newtonville Ave., Newton 58, Mass., decribes and illustrates two types of recording-controlling viscometers used for automatic control of paint viscosity.

Automatic viscosity cotrol systems have many advantages. They are more accurate than manual control; they remove the need for frequent testing and replacing evaporated solvents; they save material and they provide uniformity in finishing.
For more data, circle 58 on colored card.

Rustripper. An alkaline deruster designed primarily for the removal of rust and heat scale from metal parts. No danger of over immersion; once the rust is removed, all action stops. Can be applied in several ways—in hot or cold solutions, with or without cyanide, and with or without electric current. A product of Oakite Products Co., 32F Thames St., New York 6, N. Y.
For more data, circle 59 on colored card.

Plastisols. A new data sheet on plastisols, liquid vinyl plastics, has been published by The B. F. Goodrich Industrial Products Division, Akron, Ohio.

B. F. Goodrich plastisols are described as completely compounded, ready to use materials. They can be made into finished products by dip coating, spread coating, casting, slush molding and other processes.
For more data, circle 60 on colored card.

Abrasives; Polishing; Grinding. A 60-page Production Digest of authoritative papers on coated abrasive grinding and polishing has been published by Behr-Manning Corp., Troy N. Y., to help industry solve problems and to suggest new and practical methods.

Subjects covered include: coated abrasives theory and practice, contour polishing and grinding, the modern use of coated abrasives in wood finishing, and suggestions on cost cutting.
For more data, circle 61 on colored card.

THIS book contains much practical and up-to-date information on modern finishing materials, equipment, accessories, supplies, and methods. It has 320 pages, 6x9-in., divided into 31 chapters. Large legible type on high quality white paper, with generous margins and numerous illustrations, make the book easy and inviting to read. Subjects can be easily found either in the table of contents at the front of the book or in the 12 pages of alphabetically indexed subjects at the back.

Chapters I to XXI inclusive deal with materials—paints, varnishes, bleaches, lacquers, enamels, shellac, stain, filler; wrinkle and hammer effect finishes; pearl essence, waxes, flock, masking tape, etc.

The remainder of the book (Section II) contains chapters on finishing methods—spraying, flow coating, roller coating, tumbling, methods of drying, etc. Many references at the ends of chapters give credit for information supplied in articles previously published in Industrial Finishing Magazine.

The book is substantially bound between heavy stiff covers, colored in two tones of light orange and lettered in black. Author of the book is George A. Soderberg, Assistant Professor of Industrial Education, The Stout Institute in Wisconsin.

Price $4.00—Money Back Guarantee

INDUSTRIAL FINISHING

1142 N. Meridian St. Indianapolis 4, Ind.

Metaclean No. 85. A new anhydrous, heavy duty, alkaline soak or tank type cleaner for ferrous parts, called Metaclean No. 85, is described in a technical bulletin, copies of which are available on request to Metasurf Corp., 12830 Eaton Ave., Detroit 27, Mich. Metaclean No. 85 is made to remove heavy, difficult soils.

For more data, circle 62 on colored card.

Phosphate Coating. The Metalwash Machinery Corp., Elizabeth, N. J., publishes a quarterly, the "Finishing Engineer." The current issue contains a story dramatizing the Autocar Co.'s elimination of paint failure in the field with the installation of a Metalwash phosphate coating machine.

The issue also contains an article on tripoli, an effective polishing compound, and describes the machinery available for its removal.

For more data, circle 63 on colored card.

Precision Cleaning and finishing is the subject of a comprehensive brochure published by American Wheelabrator & Equipment Corp., 1144 S. Byrkit St., Mishawaka, Ind. Dealing with the wet abrasive blasting process, the 18-page booklet presents 40 frequently met applications in which this process can be used. Ask for Bulletin 541-D.

For more data, circle 64 on colored card.

Barrel Finishing. A new 10-page booklet on barrel finishing describes the basic steps involved in making trial processing runs, and makes recommendations for selection of media and compounds. It gives specific recommendations for barrel speeds, time cycles and barrel loading.

The booklet is free from Minnesota Mining & Mfg. Co., Dept. A5-7, 900 Fauquier St., St. Paul 6, Minn.

For more data, circle 65 on colored card.

Fast Cleaning, Phosphating. Fast conveyorized metal cleaning, phosphate coating, rinsing and drying, in preparation for product painting, are explained and illustrated in a new free book of 28 pages 8½x11-in., printed in two colors and bound between heavy paper covers.

The Alvey-Ferguson Co. has two integral and correlated departments, one for designing, engineering and manufacturing cleaning and processing machines; and the other for designing, engineering and manufacturing conveyors.

For a free copy of this new booklet write to The Alvey-Ferguson Co., 747 Disney St., Cincinnati 9, Ohio.

For more data, circle 66 on colored card.

Random Comment on the Industrial Scene

(Continued from page 6)

In 1953 the city used 2500 gallons of traffic paint. It is estimated it will use 20,000 gallons this year. Mechanized equipment is used to apply this paint to streets, expressways and highways. An educational program is in effect to inform drivers the meaning of, and the use of yellow and white lines. Reflectant glass beads are used in some cases to make lines more easily seen when visibility is poor.

Perhaps other cities and towns should adopt the use of paint instead of concrete and steel obstructions as traffic guides.

* * *

Furniture Sales. In 1953 furniture manufacturers did more than $2 billion worth of business according to Clyne Crawford, president of the National Association of Furniture Manufacturers.

It is too early for final figures on 1954, but Mr. Crawford says: "The industry definitely approximated its second best year, 1952." The factory furniture volume for that year was $2,046,863,000.

* * *

Millions of Toys. Sam G. Goss, president of the Toy Manufacturers of the U.S.A. Inc., says that retail sales of toys exceeded the billion dollar mark in 1954.

Some of the new materials used in toys include polyvinyls, polymeric vinyl and acrylic resins. Improvements have been made in packaging. New colors have been added to interest adults as well as children.

It is said that four million children were born in 1953. Each of these youngsters was ready for some kind of toys this past Christmas, and for many holidays to come. Did you know there are 16,500,000 children in the United States under five years of age? This is 40% more than in 1942. The increase in population, coupled with around the year buying, will certainly benefit the toy business.

* * *

Automation, a word which often strikes fear to the heart of the American factory employee, actually describes a burgeoning machine age which is the worker's best friend, according to a report published recently by the National Association of Manufacturers.

A word that means many things to many people, automation is used to refer to any automatic operation of productive machinery. Its widespread use, together with talk of "workerless factories," has caused many industrial employees to fear that mechanical robots will supplant them and leave them jobless.

Entitled "Calling All Jobs," the 24-page, two-color NAM booklet is designed to end such fears. It emphasizes that so-called workerless plants are a myth and will remain so in the future. It stresses the fact that industrial machinery has undergone a continuous process of improvement and that this merely has become more pronounced in recent years.

* * *

Chicago Furniture Show. Buyer attendance was up 5% to 8% over last year, and buying showed an increase of from 10% to 30% over last year's market. Prices were up about 3% in some cases due to increased material and production costs.

Many of the new offerings were in contemporary styling with French provincial, early American and some traditional styles, still much in evidence. Certainly the accent was on

colors—a wide variety—giving evidence of a prolific use of toners in finishing. Various shades of pink predominated with greens and beiges following close.

Mahogany was a strong competitor with walnut and cherry; and teakwood showed some increase. Black iron and brass held their popularity. The use of brass and stainless steel inlays in tops and fronts did not seem as popular as last year.

* * *

New Products in '55. Expect a bumper crop of new products in 1955 resulting from industrial research, according to Dr. Charles N. Kimball, president Midwest Research Institute, non-profit organization of 200 scientists in 18 different fields, Kansas City, Mo.

"Out of more than $3,000,000,000 spent in industrial research last year, there will be hundreds of significant and important new products and new industrial processes introduced this year," Dr. Kimball predicted. "And the number will increase in subsequent years."

Other present business trends spurred by research, reported by Dr. Kimball, were reduction of operating expenses and a "general movement of industries to markets rather than sources of raw materials."

* * *

"Chem-Mill" is a revolutionary new process for precision forming of metal parts for aluminum sheets and forging stock by immersion in chemical solutions. It was originated by North American Aviation and developed in conjunction with Turco Products, Inc., Los Angeles manufacturer of industrial chemical compounds. By agreement with North American, Turco is licensed to make the process, on which patents are pending, available to other manufacturing companies.

Engineering Know How. Technical improvements, practical application on new and improved production line machines of research laboratory and scientific developments can make 1955 a good year. A sampling of opinions on the coming year by leaders of varied industrial firms shows a cautious optimism and great awareness of the increasing importance of engineering know-how. The head of one declares that:

"We anticipated that 1955 would be one of metal-working's most competitive years and accelerated our research and development work early in 1954."

* * *

Wood-Paneled Partitions with mineral core construction, easily erected and just as easily moved, are now on the market. The Weldwood Movable Partions are products of United States Plywood Corp.

Fully mobile and space saving, and only 1¾-in. thick, these partitions also offer a stout barrier to sound transmission because of having an all mineral core.

They are finished in fine hardwood veneers, in a wide selection of woods.

CRS
METAL FINISHING CONSULTANT
With a well-known record of achievement. Let me help you.
Since 1928
C. Raymond Syer
P. O. Box 3273, Beverly Hills, Calif.

Industrial FINISHING Editorial

Put Time for Progress On Your Budget

★ If you spend freely and then save only what you happen to have left over at the end of the month, you can't expect to get ahead very fast. And this principle just about sums up the matter of progress in the finishing department too. When you give priority to everything else, and utilize only scraps of extra time for planning ahead, your results will be slow and uncertain.

Some months you won't have any time to devote to progress under such a schedule—and standing still in the finishing department for that long may be sufficient to allow your company's competition to gain a head start.

Clearly, you must provide for study, planning and mapping out future progress when you set up your time budget. Without a specific schedule, this all-important thinking ahead for assured development and growth may be pushed aside until you suddenly realize your finishing department is no longer in step with the times.

Our suggestion for handling the problem may sound selfish at first, but we believe we can guarantee results. It's this easy: Set aside your time for progress on the day you receive *Industrial Finishing* each month. Read it thoroughly, including the advertisements. The stimulation to your thought processes will lead you into many avenues of progress —some taken directly from your reading and others suggested by a hint here and there that urges you to follow up your thinking with action.

The new issue of the magazine will serve as a signal to use an hour or two or more of your time to prepare for a more efficient and profitable future. Most people need something definite to start the wheels of progress rolling in high gear. In the finishing department, this is it.—*G. M. Dodson.*

★ *Guest Editorial . . . Many readers can write an excellent editorial—two or three paragraphs that present a timely suggestion or valuable idea which will stimulate thought on a live subject. The Editor welcomes guest editorials and pays for those used.*

Tell Them; Yes; But Explain Why Too

★ Inspection and quality control of finished parts are important. But the best methods lose their value if the intent of the inspection procedures is not made clear to those who have to follow through with them.

It looks good to have an apparently foolproof procedure on paper and get it signed and approved by everybody who is supposed to have his initials on it. However, it's only a scrap of paper if it is kept neatly filed in the office instead of being handed out and explained to the man who is to use it.

The following experience shows what can happen:

Working on a government contract it became necessary to inspect finished parts and test them for compliance with specifications every four hours. The finishing process was continuous, on a conveyorized basis. For

economical and practical reasons it was decided to use test panels rather than the actual parts for destructive tests. The panels were to be sent through the line just like the parts. In addition, one man in the laboratory was assigned to pick up, at random and at varying intervals, finished parts for testing to compare them with results obtained from the test panels.

All went well for a while. Suddenly it was noticed that test panels from the second shift tested excellently but the actual parts failed rather badly. Frequency of checks was increased and inspection was closely watched, but the discrepancy did not clear up. Finally, Jack, the inspector on the second shift, was called in the office. Here is what he said:

"I am new here. All I was told was to see that these panels get on the line every four hours. I thought they were something special, so I finished them myself to make sure they were good."

Obviously, a few words of explanation at the right time would have avoided a lot of trouble, rejects and rework.

Of course, the point of this story applies to more than just an inspection procedure. It is surprising how often orders are given in one form or another, and that goes for people from the president on down to the sweeper and his helper, without explaining what is to be done and why.

Tell a man what he is to do, and sometimes he may do it. Explain to him what is to be done and give him a reason, and he will have a personal interest in doing the job right. It takes only a few minutes, but the time spent to make your purpose clear will pay dividends. Automation is a wonderful thing but it still takes people to push the starter buttons.—*H. R. Friedberg.*

Allied Finishing Specialties Acquires Advance Paint Co.

The Advance Paint Co. of Indianapolis, Ind., formulas, copyrights, patents, etc., have been acquired by the Allied Finishing Specialties Co., 2639 W. Grand Ave., Chicago 12, Ill. This long established company was known for its advancement in the field of special finishes such as wrinkles, hammers, polystipples, baking and air-dry synthetic enamels. They were also large producers of lacquers, sealers, stains, fillers and many other finishing specialties.

E. T. Stille, widely known as an authority on product finishes, has assumed the responsibility of merging the Advance line with that of the Stille Division of Allied Finishing Specialties Co. and the manufacture of a complete Advance line immediately. Former customers of the Advance Paint Co. will be assured of the same quality of materials and service.

Allied's experienced technical staff will assist in the establishment of the new Advance Paint Division. This new division, coupled with that of the Stille Division and Brown-Lindsay Division, represents a well balanced and fully equipped organization to meet the exacting requirements of the finishing trades.

Chadeloid; Chicago

Under a new and aggressive campaign, Chadeloid Corp. announces the appointment of Davis & Davis, 740 N. Rush St., Chicago, Illinois, as midwestern representatives to serve the area of Illinois, Minnesota, Wisconsin, and parts of Indiana, Michigan, and Iowa with a new line of vehicles and resins especially developed by Chadeloid for the wood finishing industry.

R. L. Marshall, Jr. With R-M Co. at Anaheim, Calif.

Ray L. Marshall, Jr., has been appointed Industrial Sales Representative for Rinshed-Mason Company, Anaheim, Calif. Marshall, who has more than ten years' experience in paint sales, majored in aeronautical engineering in college. Recently, he was Vice President in charge of Sales for another firm.

Yes, Enamel Skinning Can Be Stopped

★ Some users of industrial finishes do not seem to be particularly interested in whether or not the enamels they buy "skin." Enamels vary from those that do not skin at all to those that skin in several hours or even less time. We are referring to skinning that involves oxidation, and not to the skin that forms by loss of solvent from heavy materials. A breeze blowing over a heavy latex, for instance, may cause a "skin" to form in a matter of minutes or seconds.

Skinning, like many other problems in the paint business, is an individual matter. If a company uses a non-skinning enamel or uses an entire drum of finish quickly there is no problem. Enamel will not skin in a full container.

Let us suppose, however, that only a gallon or so of material is removed from a drum of fast-skinning enamel every two or three days. Soon a skin would be present and have to be removed every time the enamel was to be used. Some of the finishing material would be thrown away and quite a bit of labor might be expended removing the skins. Enamel at and near the bottom of the drum might have to be filtered to remove small bits of broken skins. If the time it takes for a skin to form could be lengthened from overnight to say two weeks there would be no problem in this case. This example is an extreme one, but you are throwing away money every time you throw away a paint skin.

The formulator usually puts an anti-skinning agent in an enamel to prevent or reduce skinning. This material—one of the more expensive ingredients in an enamel—is used in very small percentages, and acts as an anti-oxidant. The anti-skinning agent, which slowly volitilizes, retards the drying of an air dry enamel after it is applied. Anti-skinning agents, if used at all, do not appreciably affect the hardening of baking enamels. We see there is a quandry here. The more of the anti-skinning agent in an air dry enamel the less the skinning, but the slower the drying too. Few manufacturers would want to sacrifice much in the way of drying time just to stop skinning.

The use of resins which have little tendency to skin will solve the problem if they are satisfactory in other respects. Another practical solution is to use one of the newer fast evaporating anti-skinning agents which inhibit oxidation in the can; but which will evaporate comparatively quickly after the enamel is applied, allowing oxidation and drying to take place. The use of these newer fast evaporating anti-skinning agents has been helpful in solving many problems.

In any case, anyone using industrial finishes for whom excessive skinning is a considerable problem should not accept the situation as inevitable. He should consult his enamel supplier who probably will be able to help him. —*E. V. Goldstein.*

Carborundum Promotes Gottschalk

Announcement is made that Mr. Oliver A. Gottschalk, formerly controller of The Carborundum Co., has been appointed assistant to the President.

In his new position Mr. Gottschalk will assist the President in the general management of the business, conduct special investigations and studies and make recommendations on company policy and administrative matters.

Fir Plywood's 50th Year

Western fir plywood manufacturers are celebrating their 50th anniversary this year with a Golden Jubilee promotion aimed at increasing sales by ten million feet a week throughout the year.

Better Color Matching At Both Places

★ The costliest part of any manufactured batch of paint, lacquer or synthetic enamel is undoubtedly the matching of colors. In some plants this operation is known as "color tinting" but it is still the same time-consuming manufacturing step.

Despite the high labor cost for color matching specialists, and the time spent obtaining a good match, it is found that one of the most frequent complaints from industrial finishers is that of color. In many cases this may be justified, but in a percentage of instances the lab. men at the paint factory are unable to find a difference in color between their filed specimen of the batch in question and the color the finisher is seeking.

When this difficult situation arises, the methods and facilities of the finishing plant or department should be studied. A closer correlation between the method of application in the finishing plant and the method used by the color matcher or tinter will, in many instances, correct the complaint. For instance, if the production sprayer applies the material at high pressure and in a wide fan shaped spray, with as little atomization as possible, then the manufacturer of the paint material should be advised, so that he can adjust his method of spraying sample panels in order to bring it in line with the purchaser's method of application.

It is well known that many colors will vary in direct proportion to the thickness of the film applied. A heavy coating in the finishing plant will give a different tone or tint than a lighter film in the manufacturer's plant or laboratory. This calls for closer coordination between paint vendor and purchaser.

Too much emphasis cannot be placed on methods of mixing and agitation just prior to application. Very often an operator, in haste, will fail to stir the paint adequately and completely, with the result that some pigment lanquishes on the bottom of the container. Naturally, in this case, when sprayed or dipped the color which previously had been so carefully matched, will deviate from the actual color desired. Mixing paints is not a haphazard operation. It is an art which, if properly used, will result in less stripping and rework.

A good mechancial agitator is always recommended for finishing plants or departments that have much of a volume of paint application. However, regardless of how good the agitator is, it alone may not be sufficient and should be supplemented manually to insure thorough and complete mixing. The combination of mechanical and manual agitation is, in some instances,

CVC QUALITY
Casket Finishes
Write for samples
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Complete Custom Finishes Since 1865
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PAINT REJUVENATOR
All paint restored to its original consistency without opening the can.
2 minutes per gal.
MIXERS AVAILABLE
¼ PT. to 55 GALS.
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128 E. 10th St., St. Paul 1, Minn.
5 GAL. MODEL

superior to either method used individually.

When storing a supply of paints it is a good policy to use a room that has a moderately uniform temperature. This may reduce the rate of settling of some pigments. All kits, pails or cans should also be placed in an upside down position. Then any settling will actually be at the top of the container. Just prior to usage, the cans of paint can be placed right side up. Good and thorough agitation and mixing will then insure a more uniform color on the article being finished.

Some of the points mentioned may seem basic and elementary, but it is amazing how often these principles are ignored or slighted in finishing operations, with the resulting complaints and grievances. A little attention to the details of good mixing may make both the finisher's and manufacturer's lot a happier one.—*Alex Abbot.*

Enlarged Graining Equipment and Services Offered

Two manufacturers of graining equipment, one in Milwaukee, Wisc., and the other in California, have arranged to combine their sales and service facilities in order to offer the trade all over the U.S. and adjoining countries the latest in graining machines, accessories and effective service.

The American Richwood Products Co., 104 E. Mason St., Milwaukee 2, Wisc., will serve companies east of the Mississippi and in Canada, and the Roto Finishing Systems, 1105 Glencoe Ave., Compton, Calif., will serve companies west of the Mississippi.

To manufacturers interested in graining on metal, wood, plastic or fiber board, this combination of effort means that after a careful study of whatever is to be grained, customers can select equipment that will give the most attractive appearance at the least cost for equipment and production.

Roto Finishing Systems specializes in a continuous cylinder machine for graining the edges of tables, machines for graining television cabinets and assembled cabinets, as well as for graining flat pieces any length up to 48-in. wide.

American Richwood Products offers a choice of 35 different wood patterns which are photographic reproductions of highly figured cabinet woods. These can be used to grain manually or with a power machine.

Both companies have many customers in practically every line of business, in nearly every state, as well as in Mexico and Canada.

Yarnall Holds Sales Meeting

The Yarnall Paint Co. held its annual sales convention at the Penn Sherwood Hotel, Dec. 28 and 29.

Meetings were presided over by Sam C. MacKnight, sales manager. Speakers included B. F. Swackhamer, president; Horace Bentley, technical director; Frank Sullivan, office manager; Geo. Parker, Richmond, Va.; Vernon Avery, Wilmington, N. C., and Mr. MacKnight.

Prize awards were made to Geo. Freed, Vernon Avery, Steve Brodie, Chas. Fulwider, Geo. Parker, and Henry Hatton. Service awards were made to Sam C. MacKnight 10 years, Howard Ward 10 years, Ted Widenmann 5 years.

CLASSIFIED ADVERTISING

The rate on ads appearing in this department is $1.00 per line of 6-pt. light face type, per insertion. Minimum charge, $5.00. Ads set in 8-pt. extra bold face type cost $2.00 per line, per insertion.

CONSULTANT SERVICE METAL & WOOD FINISHING.

Thirty years applied research and practical application. Unbiased reports. Not connected with any finishing materials company. Write L. R. COLE, N. 902 Vista, Spokane 62, Washington.

POSITION WANTED.

Expert Foreman Finisher desires connection with reliable concern. 25 years' experience as foreman. Have knowledge both technical and practical in all finishing phases. Capable of meeting schedules with high quality finish. I harmoniously manage any number of people. Can furnish best of reference. All replies will be treated in confidence. Address IF-300, care Industrial Finishing.

POSITION WANTED PAINT FINISHING

The title is immaterial. Seek a position that will compensate for knowledge and experience of paint finishing problems. Experience: Spraying, automatic and semi-automatic, conveyor line, electrostatic. Dipping, cleaning, masking, design paint racks, layout finishing installations. Color developing and matching, paint tests. Write, setup procedures and finishing specifications. Supervision experience. Production trouble shooting. Some sales experience. At present in East. Consider relocation. Resume' on request. Address IF-292, care Industrial Finishing.

FURNITURE FINISHING FOREMAN

To work in furniture factory in Allentown, Pa. Must be thoroughly experienced in all types of quality wood finishes, hand glazes; be able to handle men. Excellent opportunity for right man. Must live in Allentown. State fully age, all experience, salary expected. Address IF-293, care Industrial Finishing.

TINTER WANTED

Opening for experienced man as tinter with well-known New England Lacquer Manufacturer. All replies should outline in detail previous experience and other helpful information. Replies will be treated confidentially and should be addressed to IF-294, care Industrial Finishing.

ROLLER COATING CHEMISTS

With at least four years' experience in coating field. Excellent opportunities, good salary and bonus, with pension and insurance plans. Plant located in midwest town. Our employees know of this advertisement. All correspondence kept confidential. Address IF-295, care Industrial Finishing.

INDUSTRIAL FINISHES SALESMAN.

Established manufacturer, synthetics, lacquers, specialty coatings, etc., interested in experienced man. Salary, expenses and unlimited earnings opportunity. Send resume in confidence. Address IF-297, care Industrial Finishing.

SALESMAN—PRODUCTS FINISHES

Wanted by national paint manufacturer for central New York state territory. Age preferred 28 to 42. Salary determined by age, background and aptitude. Extra earnings plan. Car allowance and other expenses paid. Opportunity for good future and substantial earnings. Evening or weekend appointments can be arranged. If you are looking for a permanent career with a reliable company, write in confidence, giving age, education, experience and phone number. Address IF-296, care Industrial Finishing.

INDUSTRIAL SALES ENGINEER.

With sales and engineering experience in spray equipment and related paint accessory lines. Specializing in a complete line of hot spray equipment for all types of production painting, we offer a qualified man an exceptional opportunity with a growing concern in an important industrial territory. See our page advertisement in this issue. Direct your inquiry to the Sales Manager, THE SPEE-FLO MANUFACTURING CORP., 720 Polk, Houston, Texas.

SALESMAN—INDUSTRIAL FINISHES.

Well established and expanding manufacturer in the Newark area will consider an experienced man with proven record of achievement selling industrial finishes. Our proposition and an exceptional opportunity for security and high earnings allow us to insist on highest qualifications. Open territory. Excellent lab cooperation. Answer in detail. Replies confidential. Address IF-290, care Industrial Finishing.

INDUSTRIAL FINISHES SALESMAN.

Aggressive Cleveland manufacturer of only quality industrial finishes, desires an experienced product finish salesman. Modern laboratory and production facilities equipped for fast service to support volume business. Territory: Indiana, Southern Michigan and Western Ohio. Fine opportunity, excellent income potential. Write giving resume of past experience and personal history. Our employees know of this ad. Reply held in confidence. Address IF-298, care Industrial Finishing.

BARGAINS IN FINISHING EQUIPMENT

DeVilbiss Degreasing and Washing Booths with Pump and CO2 Protective System.
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Send list of what you want to buy or sell to

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SALESMEN WANTED.

Industrial salesmen with experience. Territories open in Eastern and Central Zones. Reply to PRATT & LAMBERT-INC., Industrial Division, Buffalo 7, New York, giving qualifications.

WANTED.

A Udylite Junior Automatic Plating Machine suitable for zinc or equivalent. Please give full information, including price and where the machine can be inspected, in your first letter. Address IF-299, care Industrial Finishing.

WE MANUFACTURE

All types of custom-formulated Industrial Finishes (lacquers, synthetics, etc.) on a COST-PLUS basis. Very substantial savings possible. For full particulars, write FAIRMONT CHEMICAL COMPANY, East Syracuse, New York.

FOR SALE.

Approx. 1400-lbs. metallic powder, in colors gold, light gold, copper and dark copper, 250 to 400-lbs. of each color. Vehicle also available for mixing powder, for electrostatic sprays. Will furnish samples. MODERN TOOL & DIE CO., 5389 W. 130 St., Cleveland 11, Ohio.

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Will buy your dirty Thinners and Solvents. Send samples or letters giving approximate contents and solids. Address THE JOHANN CO., 8547 S. Ashland Ave., Chicago, Ill.

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For straining lacquers, enamels, paints. Made of heavy paper with cloth inserts in different meshes. 6-in. diameter conical shape. Write for catalog and samples. GERSON CO., Box 175, Mattapan 26, Mass.

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105 10′ sections of GP—24″ wide skate conveyor, mostly 10′ sections, wheels on 3″ centers.
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Eighteen PP Power Units, with built-in motor in 10′ and 15′ lengths. All manufactured by Rapids Standards Company of Grand Rapids, Mich. Represents about $25,000 new; available at big savings. Some never used.
Approximately 20 spray booths; some large double DeVilbiss type used in conjunction with above conveyor.
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Your inquiry solicited; about $100,000 finish room equipment in this plant which is discontinuing wood operations.
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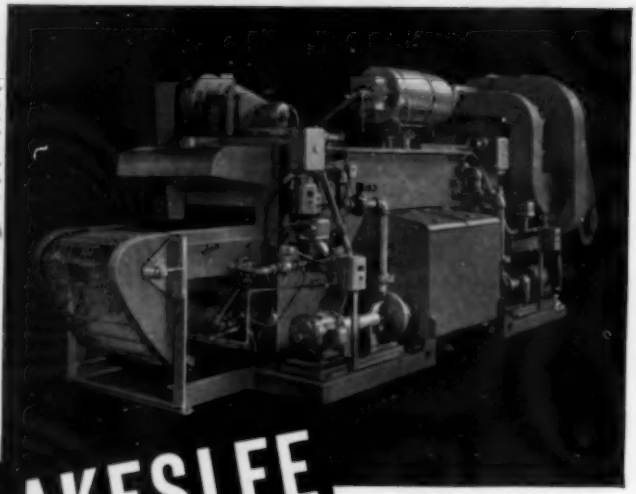

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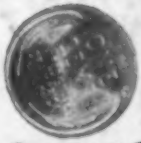

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